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The Farm.

On Nutrition in Man and Animals.

BY HENRY GOADBY, M. D., F. L. S.

PROFESSOR OF VEGETABLE AND ANIMAL PHYSIOLOGY, AND ENTOMOLOGY, IN THE STATE AGRICULTURAL COLLEGE OF MICHIGAN, AUTHOR OF A TEXT BOOK OF VEGETABLE AND ANIMAL PHYSIOLOGY, ETC.

No subject is of greater importance than the study of the nutritive function, and none so much neglected. Its importance consists in supplying the pabulum to sustain and renew our bodies, to compensate for the positive loss of substance contingent on the daily wear and tear, alike consequent upon physical exertion and the necessary nervous excitation inseparable from ordinary avocation and employment. This function does not depend upon the mere fact of placing food in the stomach, *somehow*, but by having due regard to all the conditions, and uniformly employing all the several processes which when properly combined, together form what is commonly called *nutrition*.

NUTRITION, means the distribution and assimilation of the food which promotes the growth and repairs the waste in animals.

The end to be achieved is always the same, but the means employed are extremely various. In the lowest animals that the microscope has yet revealed to man, the infusory animalcules, found only in stagnant water, which contains animal and vegetable matter in a state of decompositon, a vast number of simple bags, or follicles, are supposed to exist, and the food is rapidly digested, without the aid of accessory organs, such as salivary glands, pancreas or sweetbread, liver, &c. The wonderful minuteness of some of these creatures, of which *a single drop of water contains five hundred millions*, renders it difficult to speak with absolute certainty with regard to their structure, but the probability is that they possess *only one* digestive sac, provided with a number of follicular appendages.

The beautiful animalcules *(Rotifer vulgaris)*, as transparent as glass, show a straight alimentary canal, provided with a stomachal enlargement, and a number of glandular appendages which must be regarded either as salivary glands, or a liver—the former appears to be the most probable. Ascending gradually in the scale of being, it is most interesting to observe the increasing complication ot the nutritive function, and the organs subsidiary to it; *salivary glands* appear to be of such vital importance that they make their appearance among groups of really lowly animals, and the next great advance is, the development of a liver.

These adjunctive glands are found, (with some exceptions) long before the alimentary canal exhibits those remarkable convolutions, and great length, for which the higher animals are conspicuous; for, on the contrary, it remains a simple and straight tube. In the class of INSECTS the digestive function is wonderfully elaborated, and the careful study of the structure of these creatures is pregnant with facts for the deep consideration and instruction of erring man. The poet has said that

"Reasoning at every step he treads, man yet mistakes his way,
While meaner things, whom instinct lead, are rarely known to stray."

This is the exact truth in relation to the care we take of our digestive system, and hence the appalling array of poor, miserable dyspeptics! Has dyspepsia ever been known in a Cow, Horse, Dog, &c.?

In addition to the possession of salivary glands, to the extent in many of them of *three pairs*—the number given to man—a liver is seldom wanting in insects, and the intestinal canal is clearly divisible into portions, similar to that of man; the stomach, however, offers a great exception, which usually consists of two, three, or even four sacs, each differing in structure and formation from the remainder. One of these stomachs is so remarkable that there is nothing in nature allied to it; as insects cannot masticate their food by the action of their jaws, which are solely designed for cutting, a stomach is specially provided to perform this all important function: to accomplish this object it is supplied with a variable number of teeth, of different sizes and structure, according to the kind of food upon which the creature is destined to subsist, and a muscular coat of great power, is superadded. Some insects are carniverous in their habits, others phytivorous *(phyton*, a plant), whilst yet another series are omniverous (feed indiscriminately on vegetable and animal food), but in all these several conditions, the form of the nutrimental apparatus destined to perform these functions respectively, closely approximates the form and development of the like organs given to the higher animals, who possesss similar proclivities in relation to their food.

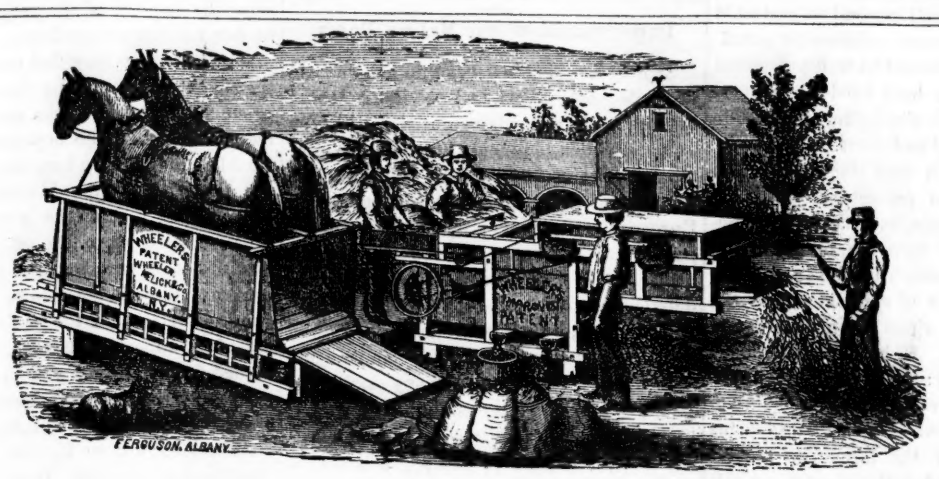
Thus, the simple form of a true digestive stomach, associated always with a very short intestinal canal, which characterises a carnivorous beetle, exactly typifies carnivorous birds and animals. On the other hand, the herbivorous insects possess four distinct stomachs, each having its own separate function, irrespective of the remainder, to perform, and having an intestinal canal of very considerable length. If we now examine the nutrimental apparatus of the herbivorous quadruped, we shall find that they also have four distinct digestive cavities, combined with an intestine of inordinate length. Again, the the omnivorous insect (cockroach) displays a marked modification in the structure of these important organs—neither so simple nor so brief as in the carnivora, nor so remarkably elaborate as in the herbivora; in this latter condition, man, amongst the mammalia, participates.

There is yet another class of insects, which find no representatives amongst the higher animals; these live solely upon the juices of plants and minerals, and require a particular modification of the ocal apparatus (mouth), no less than of the nutrimental canal. Some of these are strictly limited to the blood of animals, as their legitimate food (mosquito, Tabini, &c.); others solely subsist upon the delicious nectar of plants (Butterflies, Bees, some Diptera or two winged flies); whilst another group are content with the sap of plants, till opportunity places in their way the more highly eliminated blood of animals, especially of man (Hemiptera, or tree bugs.)

To enable one section to procure the blood of animals, a series of very short and beautifully formed lancets are necessary, and these, like a Surgeon's similar instrument, require the protection of a case. The butterflies bees, &c., lap their peculiar food by means of a tongue, or modified under jaws, specially adapted to this purpose; the same form of lancets which permit the remainder to penetrate the cortex (bark) of plants, is equally capable of piercing the cuticle of animals.—But to wound the skin, or bark, is only one stage of the process; the fluid blood, or sap, is accessible, but how is it to be made available.

To achieve this great object, and render the process as a whole complete a supplementary stomach of a kind, is given to some of these insects, viz: all the Diptera, as far as they have been examined; the bees, and the butterflies and moths. This remarkable organ has been very properly called "the pump ing stomach," and its office is literally to pump up the sap, or blood, as the case may be. The Tabinus Bovinus (ox fly), stabs indifferently a man or an ox; it instantly withdraws its lancet, and glues over the wound a pair of large fleshy lips, in the centre of which is placed the termination of the æsophageal tube; this tube connects directly the first stomach, but just before the the æsophagus enters the stomach, it receives a tube nearly at right angles to inself, the other end of which arises from the pumping stomach. This latter organ is a large sac, from the centre of it, its duct (the tube just alluded to) springs; in its usual state, it contains only a small quantity of air, which is employed in the procuration of food in this wise: by an act similar to human respiration, the weight and pressure of the body is taken off from the pumping stomach, which rarefies the air contained in it so, that the stomach becomes fully distended, and the other extremity being made fast, or air tight, by means of the fleshy lips, *the intermediate tube is exhausted;* at this instant the blood rushes up, and would continue on to the pumping stomach, which would be fatal, but just as the blood reaches that part of the æsophagus which connects with the right-angled tube conducting to the pumping stomach, the weight of the body descends upon and crushes it down and the fluid is driven into the stomach proper, where a valve is placed to prevent regurgitation. The process that takes some time to describe, is a rapid one in nature: firstly, there is action, a vacuum is produced, and up goes the fluid; immediately there is no action, and the fluid passes into the stomach; and so these condi tion of action and no action alternate till the insect's wants be fully supplied. Butterflies, bees, and numerous other insects obtain their food by similar means, the essential apparatus being, however, more or less modified. The tree bugs have no pumping stomach, but procure their food in a different manner; their *lancets* are merely four fine bristles, contained within a somewhat pointed, tubular sheath. This sheath is firstly inserted into the bark of a plant, or cuticle of an animal, and when firmly in, the lancets are protruded to stab deeper into the tissue, after which they are withdrawn into the tube in the form of a compact body—not as four, but as one—in which condition they work up and down the tube, like the piston of a pump, and thus draw up the fluid.

(To be continued.)



WHEELER'S IMPROVED PATENT COMBINED THRESHER AND WINNOWER.

We present an engraving of the Improved Two Horse Combined Thresher and Winnower manufactured by Messrs. Wheeler, Melick & Co, of Albany, New York, and for the terms of which we refer to their advertisement on the last page of this number of the FARMER.

Cultivation of Oats.

Gradual deterioration of this Grain—Cause of the recent Failure af the Crop.

BY EDWARD MASON.

The inferiority of last year's oat crop ought to be a warning to the farmer that the present mode of cultivating that useful cereal is defective, and that something must be done towards the improvement of the soil, and the quality of the seed. The very extensive failure of the crop was doubtless occasioned by the unprecedented wetness of the spring, which prevented the farmer from preparing the land, and getting in the seed till the season was too far advanced; and even when the crop was put in, much of the soil was saturated with water. Oats delight in dry, rich land, they never thrive well in clammy, adhesive soils, nor where the roots come in contact with stagnant water. Excess of moisture produces a soft, unhealthy growth, which is liable to be injured by rust and mildew.

Oats require to be sown early, and the soil for them should be well prepared by the plow, harrow and roller. Some of the best crops of this grain in Europe are raised on lea, that is, on rich land, plowed out of the green sod, the furrow slices being of a uniform breadth, and an equal depth, and plowed into ridges, or flats of various sizes, according to the nature of the ground, or the caprice of the farmer. The furrow slices being laid, or lapped on each other, at an angle of about 45 degrees, little drills are formed, which become proper receptacles for the seed, which is sown broadcast. The harrow is passed repeatedly over the ground, until the surface is fine and the seed well covered. When the ground has been plowed into narrow ridges, or "sets," the seed deposited, and the harrowing completed, an additional covering of earth is sometimes put on from the furrows or trenches; from these the soil, after being softened by the plow, is shoveled evenly over the surface. Some farmers are so anxious to have the seed well covered, that they make use of an implement called "a land presser," for the purpose of following the plow, clearing the drills, and pressing the soil so as to make them deeper, and thus to ensure a better covering.

When oats succeed turnips, or any other green crop, the land is usually plowed deeply in the fall, or early in the spring, and cross-plowed, harrowed and rolled before the seed is drilled in. This latter operation is performed in various ways. In some cases small drills are formed by one-horse plows; these are called baulks, and are from nine to twelve inches asunder and about three inches deep: on these the seed is placed broadcast and harrowed in. The young plants come up in regular drills, and the ground being fine and mellow, the crop is generally good. When the field is to be laid down to grass, the seeds are scattered evenly and the roller is used to compress the soil, and make the surface perfectly level and smooth. In some cases the oats are spread on the surface and plowed in, and this plan was for a long time considered the best of all, but it is now going out of use, and drill machines are becoming the "order of the day." When the ground has been well prepared, these machines work admirably, but when the soil is stiff, lumpy, or wet they cannot be used. In every method of sowing, care is taken that the seed be well covered, for without this precaution the farmer can not expect to reap a good crop. In Great Britain and Ireland the oat crop is sown in February, March and April, the earlier the better, providing the ground has been properly prepared. The late crop is always deficient in weight, and inferior in every respect. A portion of the crop is reaped in the latter end of August, the greater part in September, and some in the beginning of October. Good crops are always ripe before middling and poor ones. There are several varieties of winter oats which are sown in October and reaped in August; these latter stand the winter well, and produce heavy, well ripened grain. It will be seen that in Europe oats are sown earlier, covered better, and reaped later than in this country; they consequently have a longer time to come to perfection, and they do produce much better and weightier crops than are to be seen in the United States. When the seed is well covered, the young plants withstand the heat of summer, and send their roots far downwards in search of their favorite ingredients. Add to these circumstances the facts, that the European farmers are more particular in selecting seed than the American, and take great precautions against the increase of weeds and destructive insects.

The best time for sowing oats, or any other crop, is when the ground is fresh and moist, after being tilled, as at that time the seed commences to vegetate immediately, and the young roots penetrate the mellow soil on every side. Warmth and dampness combined are extremely favorable to the germination of seeds. If the crop cannot be put in immediately after the ground is plowed and the drills opened, the best time for sowing is when the soil is just beginning to dry, after a genial shower: when the seed is covered, and the surface of the soil well pulverized, whilst the bottoms of the drills are damp, this moisture will cause the grain to vegetate immediately; the heat can not penetrate the well pulverized surface for a long time, and it is probable that the plants will have braided strongly, and covered the ground well, before any harm can be done. The access of atmospheric air is essential to the vegetation of seeds, and the growth of roots. Fine mellow soil admits the air and mitigates heat, whilst that which is soddened or tramped when wet, lies so compact, and is pressed so closely together that the air can not penetrate, and it becomes hard and baked like a brick.

A considerable portion of the oat crop of last year was sown whilst the ground was wet, and consequently in an unfit state to receive the seed, and the result was what might have been expected; a great deal of seed was smothered, and the portion that did grow produced an inferior crop. The oxygen of the atmosphere is the part which has the greatest effect in promoting vegetation. From

experiments made by Achard, it appears that seeds will not germinate in nitrogen, hydrogen or carbonic acid gas, except when mixed with oxygen; and Humboldt found that seed previously steeped in water impregnated with oxymuriate acid exhibits a very rapid germination. It is sometimes found in spring on opening pits of potatoes, or other vegetables, that they have not commenced to show the smallest signs of vegetation, yet in a day or two after the admission of air, they grow rapidly; this is no doubt caused by the action of oxygen. In the cultivation of oats, as well as every other crop in the field or garden, the seed should be well covered to protect it from heat, and to ensure moisture for germination, and the soil should be well pulverized in order that it may hold fixed air and permit the oxygen of the atmosphere to come in contact with the seed and roots.

In this country the seed does not receive sufficient covering to protect it from the excessive heat of summer, and the land not being drained or tilled deep, the roots can not go downwards in search of food; and the plants being deprived of nourishment at the most critical time, ripen prematurely and yield a poor return. It has been said that draining will not pay: such may be the case. A reckless and extravagant outlay in draining, or any other improvement, may disappoint the expectations of the farmer, as several years may elapse before the expenditure will be reimbursed; but when treating of the successful culture of cereal, or forage crops, the vital importance of draining must not be ignored; it must be kept before the public, and will no doubt furnish a fertile theme for centuries to come.

Along with the causes above mentioned, there are several others which assist in producing the deterioration of the oat crop in the United States. A few general remarks on them be useful. The want of a judicious rotation of crops, has a very injurious effect on the soil, and to it in a great measure, may be attributed the very great falling off in the produce of the land which is exhibited in the agricultural statistics of this country. The crops raised by the farmers are of two kinds, culmiferous and leguminous, differing entirely from each other. Wheat, oats, barley, rye, &c., are of the former class, whilst peas, beans, turnips, cabbage, mangel wurtzel, &c., belong to the latter. Culmiferous crops, says Bonnet, have three sets of roots: the first issue from the seed and push to the surface an upright stem; the second issue from a knot in that stem, and a third from another knot near the surface. Hence the necessity for placing the seed so deep as to provide for the different sets of roots. Leguminous plants are constructed differently—peas, beans, and cabbage have a number of small roots, all springing from the stem like the uppermost roots of culmiferous plants, but they have no other.—Turnips and potatoes have bulbous roots; red clover a tap root: some plants exhaust the soil, others are genial to it. After a soil is completely exhausted of those ingredients which are necessary for the growth of one kind of crop, a change may be made, and it may be found capable of producing a crop of a different description, and this fact is of the greatest importance, as upon it is founded the theory of rotation of crops. The whole art of rotation consists in suiting the crops to the nature of the soil, and varying them in such a manner, that whilst the greatest amount of produce is raised off the land, still the soil shall not be impoverished. Thus, when a grain crop is raised, a quantity of phosphates and nitrogen has been extracted from the soil. Returning the straw to the ground in the form of manure, will restore the salts which have been extracted, whilst the nitrogen may be restored by growing green crops. The difference between a culmiferous, or white crop, and a leguminous, or green crop, with respect to the soil, is great; the former ceases growing long before it is reaped, the leaves wither and the ground becomes compact and hard: the green crop growing until it is removed, keeps the ground pliable, loose and mellow. After a white crop the ground is not only hard, but dry; after a green crop it is soft and moist. The continued growth of grain crops exhausts the soil, and multiplies weeds and destructive insects. The introduction of green crops increases the fertility of the soil, and banishes those pests of the the farm.

The influence of rotation of crops in destroying injurious insects, deserves particular attention. Millions of these troublesome creatures live on the collar of cereal plants, and when the same kind of crops are grown for several years in succession they multiply enormously and commit formidable ravages. The wheat fly is the offspring of defective husbandry. Rotation will drive it from the field. Destructive insects of every kind are fostered and increased when their favorite crops are grown for several years in succession; but when a crop intervenes on which they can not feed, they vanish. When the soil is prepared by green crops, we may expect to see good crops of grain.

Some laborious investigations by Mr. J. P. Norton, have established the fact that the mineral substances found in the oat plant not only vary with the soil, but also in the different varieties of the plant, and in the same varieties when produced in different soils.

(To be continued.)

CATTLE.

Improvement of our Native Races.

Strictly speaking, we have no native race of cattle; none aboriginal to our country; none that can truly claim nativity with the animals of this continent: but all, whatever the varieties of form, size, or color, are the progeny of the various English and other European races, whose progenitors were imported into our country, in the early settlement of this continent, by immigrants from different localities and countries.

These have been crossed and mixed up in a confused medley of every possible race and variety, without adherence to any established principles of good breeding, and without much attention having been given to the matter of improving them, except, perhaps, in their milking capacity. And the offspring of these, subsequently crossed in, more or less with some of the English thoroughbred races, often with two or more of them in succession, are also recognized under the term Native cattle. They cannot be classed as a distinct breed, having no fixed peculiarities o. characteristics, which they are capable of transmitting with certainty to their descendants, nor any hereditary qualities peculiar to themselves as a tribe or family. Many individuals among them, are possessed of valuable and even superior properties in some one capacity, and sometimes we find more than one quality united in the same animal. But these properties are accidental in them, and not transmissible to their offspring with any certainty. Their progeny, after all the care and attention that we may bestow upon them, may turn out *scrubs*, instead of becoming valuable for any specific purpose.—How often do we meet with disappointment in raising calves from the best milkers of our stock, by finding at the end of three or four years of labor and expense, that our calf is a worthless cow?

Now, no one can afford to keep poor stock, or raise that which is so uncertain in its results; so that we must either abandon the Natives and resort to the thoroughbred races, where there is certainty in results, or we must improve the natives, in some manner whereby they shall of themselves, possess the qualities which we desire in our stock, and shall also be able to transmit those qualities to their offspring hereditarily. But the thoroughbred races, however superior, cannot at once, be substituted for the Natives: there are too few of them; and were it practicable, all are not prepared to adopt them. The natives, then, must be retained, and by some method improved. No doubt that by a judicious selection of both males and females from the natives, and afterwards from *their* progeny, and so on, they might be made to combine and retain valuable properties, and to transmit them to their offspring with all the certainty of the thoroughbred races.—But this course, to insure success, requires excellent judgment, great experience, indefatigable perseverance, no sparing of care or expense, the patience to endure innumerable disappointments, and calmly to wait long years for the expected results; too much for most men to attempt. One method remains, a resort to the thoroughbred races for males, and gradually to grade our stock up to the thoroughbred standard. This, we believe, will give more rapid improvement, at less cost and with more certainty, than can be obtained by any other means.

The selection of the sire, from which to breed, is made with more care than was given to the matter in the earlier days of our cattle history, yet, even now, it is more a matter of accident, instead of calculation and design, than is consistent with either rapid or permanent improvent.

In giving primary importance to the selection of the sire, we believe the improver is progressing in the right direction; not that it is unimportant what the characteristics of the female may be, for we deem this a matter of great importance, and one that is and has been too much neglected. But we are of those who believe that the properties of the male are more obviously imprinted on the offspring, than are those of the female, (all other conditions being equal upon both sides.) But to confer upon the offspring any particular set of properties or capacities with certainty, they must be superimposed by parents derived from a race which have long possessed those properties, inbred upon them through a long line of ancestors and which has not been broken in upon by a cross from any race which did not possess those properties in equal perfection. If this requirement exists on the part of the sire, the offspring will be likely to follow in the line of the male and receive the impress of his peculiarities of form. But if this condition is wanting on the side of the sire, and yet exists on the part of the dam, the offspring will probably follow in the line of the female, and receive the impress of the properties possesed by her and her progenitors.

And herein, we may find on explanation of the ill success attending the efforts to improve native cattle by the use of grade and cross-bred sires. The imperfections that we would be rid of, have long been inbred upon the part of the dam, while the chain of descent, on the part of the sire, upon which should come down to the offspring the good qualities of his race, has been broken, and the progeny follow in the line of the female, instead of in that of the male parent. The cross-bred animal, we believe, should be discarded, in any attempt at improvement in the natives. They are a compound of distinct elements, having no established properties to communicate, and we have no guaranty what their progeny will be. In all cases where it is possible so to do, we should employ a high-bred sire, that is, one whose ancestral race has long possessed the properties sought to be conferred upon the progeny. And here we may allow, and even seek for, sires that are close, or in and in bred, if they and their ancestors possessed the required properties, as they will thereby, be the more permanently inbred upon the sire, after which we desire the offspring to follow.

To obtain improvement in the form of our stock, care must be used in the selection of the female with reference to her size, as compared with that of the male, or our improved natives may be worse in form than their native ancestors. The improver must recollect that the dam should be proportionally larger than the sire, not smaller. Experience has sufficiently demonstrated that where the male is much larger than the female, the offspring will generally be of an imperfect form; but that where the female is proportionally larger than the male, the offspring is generally of an improved form. This is explained, when we recollect that the size of the fœtus is proportioned to the size of the sire, and unless it has room to expand to its full size, it will be compressed and distorted by the confinement. Its continued effort at growth serves to thrust it, still more and more, out of its proper place and shape.—The physical organism of the cow, finding itself deranged and overtasked, by the large size of the fœtus, strives to remedy the evil, and avoid the consequent danger of the destruction of the dam, by withholding the nutriment that should go to the growth of the young, and driving it from the system by some other channel, thus giving to the progeny all the characteristics of a starveling, even before its birth. Imperfect in its form, size and growth, and immatured, it is thrust forth, diseased, distorted, coarse and unnatural, as a cumbrance upon nature. Subsequent care may do much to remedy, but can never entirely obliterate the evil: hence the proper method of improving the form of animals, is to select well formed females and couple them with males which are proportionally smaller in size than the female.

Many thousands of dollars have been thrown away, in unsuccessful attempts to improve the native cattle of the country in violation of this rule, by coupling the smaller, and often ill-formed, female, with the largest imported Durham bulls. And the ill success so generally attending this course, demonstrates anew, the correctness of the rule.—Not that the Durham breed of cattle are in fault because of such results. If they were never coupled in violation of this rule the numerous scalawags among their progeny would be extirpated. The fault is that the improver has attempted a cross of the elephant upon the donkey, and has produced what might have been the expected result. If the improver desires a Durham cross, he should select the largest, well-formed cows to be had, and couple them with a small framed, compact, fine finished bull, of the purest pedigree, and which is not disproportioned to the female in size.

The claim is sometimes made, in favor of the Devons, that they are not within the operation of the rule, if any such there be. That they will invariably improve the forms and qualities of their crosses with the native cattle, without reference to the comparative size. But nature's laws are not to be annulled by names or breeds. They are within the rule, as well as others, notwithstanding the many cases which are seemingly in contravention of it. They are nearer the size of the natives, and of course there will be fewer violations of the rule, in an indiscriminate use of them, and consequently, more numerous examples of improvement in proportion to numbers—They are a very ancient breed, whose characteristic qualities have for ages, been inbred upon them, and hence, are all the more likely to impress upon the offspring their peculiarities of form. They are a small boned, symmetrical, deer-like built race, the calves being, when dropped, peculiarly small, compared to the size which they subsequently attain, and the fœtus being thus proportionately small, we are enabled to use them, with good effect, in a vast number of cases, where there is a disproportion in size, without, after all, infringing upon the substance of the rule; but there is a limit with them as well as others, beyond which we cannot pass, except the offspring proclaim that scalawags are on the increase.

We conclude, therefore, that to effect a permanent and rapid improvement of native stock, by a resort to the thoroughbred races, the improver must select cows of good size, of the best forms attainable, and of the highest milking capacity, quantity and quality both being considered, and couple them with males, whether Durham, Devon, Hereford or whatever the breed chosen, which are proportionally smaller than the cows, and which are possessed of a good form, and a pure unbroken pedigree: looking not only to the feeding or beefing qualities that he possesses, but also to the milk-giving capacity of the family from which he springs. In the offspring, we should find improvement in form, in milking properties, and in feeding capacity. With the females of this cross, the same course should be pursued; always resorting to pure bred males, and adhering to the breed first selected, not changing, as is too often the case, from one breed to another.

In this manner may we hope to combine several good qualities in our native stock, rendering them fixed and hereditary therein. After which, and not before, may we carry the improvement still further, by then breeding from this improved stock among themselves, selecting the best specimens of both sexes and coupling. From the offspring of these, we may safely breed, as one of the best thoroughbred races which the world can boast.

'T.'

The Meteorology of the State for 1857–8.

AS OBSERVED AT STOCKBRIDGE, INGHAM COUNTY, BY C. MILLER.

DEAR SIR.—I send you the tables I mentioned to you some time since, they are made up from close observation, and I believe them to be as nearly correct as possible. These tables contain the number of days in each month in which a certain description of weather prevailed; second, the number of days in each month that certain winds prevailed, and also the mean height of the thermometer during each month. These last were made from the observations taken at noon of each day, with the thermometer hanging to the column of the porch on the north side of my house.

C. MILLER.

Weather. 1857. *Winds.*

	Clear days	Part Clear	Cloudy	Snow	Rain	Wind, No. days North	East do.	West do.	N. West do.	S. West do.	South do	S. East do	N. East do	Thermometer, Mean.
Jan.	14	5	6	5	1		7	1	10	6	6	1		14°
Feb.	9	1	7	2	9		5	1	9	1	4	6	2	27°
March	18	5	12	1			2		13	5	7		2	31°
April	9	7	6	5	3		5		8		9	1	5	40°
May	14	0	7		10		2		7	3	9	1	5	58°
June	12	8	4		6		1		7	5	15		1	76°
July	14	6	2		9		1		2	9	7	3	6	78°
Aug.	15	6	3		7		1		7	9	11		2	74°
Sept.	20	1	3		6			1	2	3	17	1	3	69°
Oct.	12	8	6	1	4			1	2	14	11		1	52°
Nov.	12	2	5	7	4				3	9	15		3	36°
Dec.	8	4	17	1	1				5	6	12		5	35°
Total	152	58	78	22	60		24	4	75	70	123	14	35	49°

	20													

Weather. 1858. *Winds.*

	Clear days	Part Clear	Cloudy	Snow	Rain	No. days West	N. West do	North do.	N. East do.	East do.	South do.	S. West do.	Thermometer, Mean.
Jan.	15	6	6		4		4	7	1	2	4	6	1	6	35°
Feb.	5	7	11	5			5	7		3	1	3		9	25°
March	15	5	5	1	5		6	7		4		7	1	6	39°
April	9	3	11		7		3	6		3		8		10	47°
May	6	10	4		11		2	4	1	3		10	2	9	57°
June	20	3	2		5		4			3		8		15	76°
July	20	4	4		3			8	2	3		7	1	10	80°
Aug.	17	4	2		8		4	10		2	2	3	1	9	75°
Sept.	18	4	5		3		1	4	3			6		16	68°
Oct.	10	3	8	1	9		2	5		4	3	6	1	10	56°
Nov.	3	2	14	7	4		1	11		6	1	4		7	36°
Dec.	4	3	18	2	4		2	3	2	2	1	5		16	32°
Total	142	54	90	16	63		34	72	9	35	12	73	7	123	52°

Preserving Eggs.

The Jonesville *Independent* states that a Mr. Babcock, of that village, has been successful in preserving eggs by putting them in a brine composed in the proportion of one pint of salt, one pint of quicklime and three gallons of water. It is said that they will come out of this mixture at the end of the year as fresh as when put in. We should advise, also, that the eggs and mixture should be kept in a cool place.

HOME NOTES.

Nankin Sheep.

This is a variety of sheep that seems to be a new race to us, and evidently belongs to the fat-tailed varieties. Mr. Theodore Smith, of Smith's Island, in the town of Norwalk, Connecticut, refers to Gen. Wm. Hale, William Mitchell and Joseph Hoxie, of New York, and says that he sold his entire flock to Mr. Pell, at the time of his exhibition of them at the Crystal Palace in December 1857, and then adds: "Three years since, I received three ewes from Nankin, from which I obtained in twenty months, seventy-two sheep. One ewe now in the flock, produced twelve lambs in fifteen months—three, four and five at a birth, and they commenced breeding at four-and-a-half months old. This breed are perfectly hardy, having endured the past severe winter, on my Island, without any shelter, producing lambs constantly, which bore the cold as well as the old sheep, and matured rapidly. They will not jump fences, either stone or wood. The flock were separated last season from a rye field, by a cobble stone wall, two-and-a-half feet high, over which they never attempted to pass, nor can they be driven over any description of fence. The fibre of their wool is exceedingly strong, and the fleece heavy. The mutton cannot possibly be surpassed, as it is entirely free from the strong flavor usual to sheep, and is tender, juicy and delicious. The tails are broad, and when properly prepared, much resemble marrow, and form a delightful morsel for the epicure."

It is not likely that any one will get wooled by reading this notice, for information as to what are claimed as the properties of these prolific animals. We should not wonder to hear soon of a litter of sheep being as common as a litter of pigs.

A Seeding Machine.

Mr. E. G. Norton, of Monroe, called on us a few days ago, and exhibited a model of A. G. Babcock's Seed Sowing Machine, which, by a very simple operation, sows seed of all kinds of grain either broadcast or in drills, harrowing and rolling the seed in at the same time. The machine is simple in all its parts, and not likely to get out of order, easily controlled by the driver. It consists of a roller and a set of independent teeth, which at the same time make the furrows and act as troughs or gutters to convey the seed to the ground, and attached to which is a flange that covers the seed as fast as deposited. The large roller follows and furnishes the power which distributes the seed, the distribution being regulated by pulleys. Manufacturers may look at this model with some degree of attention.

R. G. Corwin's Sale of Cattle.

This gentleman has sold his farm by private contract, and now only offers his herd for sale. These Shorthorns are amongst the best in the West, and include animals that have taken first prizes at many of the State fairs of Ohio, Indiana, Illinois and Kentucky. Amongst the bulls offered are the farfamed Crusader, Greenholm, a son of Balco out of a daughter of New Year's Day, and a number of the sons of Crusader. Amongst the cows are Scottish Blue Bell, Erin Strawberry, Fashion, Edith, Flora Bell, Queen Matilda, and some others. A number of these are imported.

An Excellent Example.

We learn that the Branch County Agricultural Society have offered the MICHIGAN FARMER as a premium to a large extent, to be awarded at the next County fair. This the right kind of way to show the estimation in which it is held by the community.

To Cure Hard Pulling Horses.

A writer in the *London Field* thus prescribes a remedy for hard pulling horses:—"Put the curb chain inside the mouth, from hook to hook, instead of out. How or why it acts with such considerable effect I know not, but at times it utterly puts an end to over-pulling. To stop a runaway horse, or render the most pulling brute quiet and playful with his bit, get a double plain snaffle, rather thick and heavy, the joints rather open; cut an old curb chain in half and let it hang down from the bottom snaffle joint. When the brute offers to pull or bolt, instantly merely drop your hand; of course the curb chain will drop between his front teeth, and should the beast savage it—if any of your correspondents wish to try the effect on themselves, they have only to place a nut between their front teeth and try to crack it—they will soon understand the vast difference between pleasure and pain. So does the horse, and in a short time he will play with the very thing he before tried to savage, and in the end become, from a vicious brute, a playful and good mouthed animal."

The Garden & Orchard.

The Robin, and its utility among the Insects.

We are indebted to the Massachusetts Horticultural Society for an excellent report on the well known Robin, and its utility as a destroyer of insects. This report is written by J. W. P. Jenks, Professor of Zoology, and is clear, pointed and an excellent description of the habits of the bird, and also is a model report on such a subject: We therefore copy it:

"It will be remembered, that at the January meeting of our Society, 1858, it was proposed to make the Robin (Turdus migratorious, Linn.) a subject of special investigation throughout the year, to the end that we might arrive at some positive conclusion in reference to its utility to the horticulturist.

As chairman of the committee appointed for the investigation, I submitted a report of progress in April of that year, and now beg leave to incorporate that with the *present*, as our report for the entire year.

PLAN ADOPTED FOR THE INVESTIGATION.

First, to obtain birds at day-break, mid-day, and sunset.

Second, to obtain birds from both the village and country.

Third, to preserve in alcohol the contents of each gizzard.

RESULTS IN PROCURING SPECIMENS.

Beginning with the first week in March, 1858, specimens have been examined at least *weekly*, and most of the time *daily*, to December, and during the winter months, at least semi-monthly to the present date.

RESULTS OF INVESTIGATION

First. Early in March, numbers of this bird made their appearance in this vicinity; but, until the second week in April, only the male birds.

Second. The gizzards of those killed in the morning were, as a rule, either entirely empty, or but partially distended with food, *well macerated*; while those killed in the latter part of the day were as uniformly filled with food freshly taken.

Third. From the almost daily examination of their gizzards, from the early part of March to the first of May, not a particle of vegetable matter was found in the gizzard of a single bird. On the contrary, insects in great variety, both as to number and kind, as well as in every variety of condition as to growth and developement, were the sole food.

But nine-tenths of the aggregate mass of food thus collected during this period consisted of *one* kind of larva, which, through the aid of Baron Ostensacken, Secretary of the Russian Legation at Washington, I was enabled to identify as the *Bibio albipennis, Say*, and whose history and habits, by the aid of Dr. Asa Fitch, entomologist of the New York State Agricultural Society, I was enabled to make out quite satisfactorily.

From one to two hundred of this larva were frequently taken from a single gizzard, all in a fresh, unmacerated condition; and usually, when this larva was found, it was the only food in the stomach.

To quote from a communication received from Dr. Fitch, he says, "My attention was first directed to this fly some twelve years ago, when I was occupied in investigating the wheat midge. I observed it to be so very common in fields of growing wheat that I suspected it of living at the expense of that grain crop; but on looking around I found it was equally as common everywhere else—resting upon the grass, leaves, and flowers in my yard and garden, as well as in meadows, pastures, and forests * * * * * * * * * * * * * * It comes abroad about the 20th of May, and continues about a fortnight. You will readily recognize it by its commonness, and its white transparent wings; its body being black, clothed with soft white hairs. It is very sluggish, moving around but little, and is easily picked up by the fingers. * * * * * * * * * * On page 764 of the London Gardener's Chronicle of the year 1844, is a valuable article of Ruricola, (J O. Westwood,) giving a full history of the *Bibio Marci*, the European analogue of the question. 'It appears these insects (unlike most others of the family Tipulidæ to which they pertain) are most pernicious, the larva feeding upon the roots of plants, sometimes to such an extent as to cause them to wither and die. Ruricola states that the larva of the Marci, and other allied species of Bibio, are frequently sent to him by gardeners, who find them to be mischevious in their strawberry beds, vine borders, flower pots, and other situations where the soil remains undisturbed during the autumn and spring.' And another writer, Bouche, says, 'that his bed of ranunculuses was completely demolished, for several successive years, by these worms eating the roots.' From these facts every one will perceive that the robin, consuming, as you found it to do, from one to two hundred of these Bibio larva daily, during the months of March and April, has probably been ridding our gardens of these vermin every year hitherto; thus rendering us an important service, of which we have been wholly unaware. * * * * * * The larva are gregarious; living together in swarms, and perforating the ground so that it resembles a honeycomb.

This is probably caused by the parent fly depositing her whole stock of eggs in one spot, she being too lazy and slothful to wander about and distribute them in different places. Hence the robin, on finding one of these worms, knows that there is a host of others at the same place, and thus repairs to that spot, day after day, and gluts himself with them till the whole colony is exterminated."

To this extract I may be allowed to add, that my own observations, during the past year, confirm the conclusions of Dr. Fitch respecting this larva in every particular, having found its colonies in November, and observed the fly in early summer. I may also here introduce an extract from a communication of a lady friend, under date of Oct. 7, 1858 She says: "On speaking of your remarks concerning the food of the robin, at the Teachers' Association at Bridgewater, in June last, to my father, he told me of a little circumstance which I thought just proved your statement. It was formerly the custom to have a shooting match on election day in May. On such an occasion in North Bridgewater, about the year 1820, a great many birds were killed, so many that a man bought them by the cart-load for the purpose of enriching his land. In consequence, there was a great scarcity of birds in that vicinity, and a great amount of grass land seemed to be injured, but from what cause no one knew. The grass withered and turned dark-colored, as though it had been burnt, commencing in small tufts and spreading in large circles.', It would seem that the insect under consideration would, growing undisturbed, produce precisely this result.

Fourth. During the month of May, the Bibio larva entirely disappeared from their gizzards, but, up to the 21st of June, was replaced by a variety of insects or worms only, including spiders, caterpillars, and beetles of the family Elateridae, the parents of the well known wire-worms, so destructive to corn and various other seeds when committed to the ground.

The earth-worm I found to be a favorite food for the young bird, but sparingly employed by the adult for its own use.

Fifth. From the date of June 21st, I began to find strawberries, cherries, and pulpy fruit generally, but in a majority of the examinations intermingled with insects, which led me to conclude that they were not fond of an exclvsively vegetable diet, but rather adopted it as a dessert, and from the ease of procuing it, particularly during the enervating season of *moulting*. At this season of the year, I discovered a marked difference in the food of the birds killed near or in the village, and those killed in the country at a distance from gardens and fruit trees, the latter having less of stone fruit and more of insects in their gizzards, which led me to conclude that the robin is not an extensive forager.

Sixth. The mixed diet of the robin seems to continue from the ripening of the strawberries and cherries to October, the vegetable portion consisting, during August and September, in great part of elderberries (Sambucus canadensis) and pokeberries (Phytolacca decandra)

Seventh. During the month of October the vegetable diet is wholly discarded, and its place supplied by grasshoppers and orthopterous insects generally.

Eighth. Early in November the robin migrates southward—the few remaining eking out a miserable existence, during the winter months, on bayberries (Myrica cerifera), privet berries (Ligustrum vulgare), and juniper berries (Juniperus communis.)

Having entered upon this investigation unprejudiced, I have only sought for the facts as observation should develop them, and these are the results to which I have arrived at no small expenditure of time and labor. In this investigation I have been entirely unaided beyond the assistance of my pupils in procuring specimens, except by Mr. E. W. Dickerson of Plympton, who kindly obtained and examined a few individuals, and the valuable assistance of Baron Ostensacken and Dr. Fitch, already alluded to in this paper. I do not however feel satisfied to present this as a final report, intending on my return from Europe in September, to subject the contents of my vials to a critical microscopic examination, that I may, if possible, identify every species of both insects and vegetables. To aid me in this more specific portion of my labor, I hope to make the personal acquaintance of M. Florent Prevost, Naturalist to the Museum of Natural History in Paris, who has made the alimentation of birds a careful study, and recently presented his first memoir to the Imperial and Central Society of Agriculture in Erance, for which he was awarded a gold medal, and from which fact I infer the great interest the subject is awakening on the other side of the water. All of which is respectfully submitted.

J. W. P. JENKS, *Chairman.*

Middleboro', Mass., March 5, 1859.

Remarks on the Dahlia, Historical and Cultural.

BY A YOUNG FLORIST.

The Dahlia is a native of Mexico, and was discovered by Humboldt, growing in sandy soils, between four and five thousand feet above the level of the sea. It was first introduced in Europe from that country, and one variety flowered in 1789, under the care of that eminent botanist Cavanilles, Professor and Director of the Botanic Garden at Madrid, where he soon after flowered two others, figured and described in his Scenes.—The first plant was received in England by the Marchioness of Bute, which appears to have been soon lost; and this species of Dahlia was unknown in England until it was reintroduced in 1804, by Lady Holland, who brought seeds of it in that year from Madrid. The name of Dahlia was given to this flower by Cavanilles. of Madrid, in 1789, in honor of Prosessor Dahl, a Sweedish Botanist.—This nama was afterwards changed by Wildenow to Georgina, in honor of a German botanist, who resided many years in St. Petersburg, in consequence of the genus *dalea* having been previously established by Thumberg. As, however, the name is neither spelled nor pronounced the same as Dahlia, and as the name of Dahlia was given long before that of Georgina, the plant is now restored to its original appellation.

During the first few years of their introduction into Europe, few varieties were originated, and those of very inferior merit. We find this circumstance to have been noticed in the most scientifically managed gardens of France and Germany, as well as in the Madrid garden, where they were first introduced. De Candolle, in his memoir, published in 1810, that is, eight years after their introduction into the Jardin des Plantes, describes only eight varieties, and from what can be deduced from that paper, it appears that he had not, up to that period, produced a double flower, although he evidently expected such a result. In the Berlin garden, long noted for the success of its cultivation, and into which the Dahlia had been received as early as 1800, no new varieties were obtained from seeds till six years afterwards.

The Dahlia is readily increased by seeds, cuttings, dividing the roots, and grafting: by seeds, only with the view of obtaining new and better varieties; by cuttings, to perpetuate good varieties already obtained in the greatest numbers, and also to have small roots or tubers convenient for exportation; by dividing the root to increase known sorts to a limited extent; and by grafting, to obtain plants with large roots more rapidly than the other methods. This last method is but seldom adopted. When seeds are procured, they should be carefully dried and preserved during winter, and sown in March or April in seed-pans or pots, in a hot-bed or other temperature of about fifty-five or sixty-five degrees. If the plants come up quickly, it will be well to transplant them into single pots of the small sixty size, one plant in each pot, and keep them in a temperature of from forty-eight to fifty-five degrees, till the first week in May, when they may be planted out in a border of rich, deep, mellow, good soil. They will require particular attention against late spring frosts till towards the 20th of May, afterwards their only culture is to stake them as they grow up, and select the most favorable looking flowers as they appear, throwing away those that are single, or of inferior merit. The best and by far the most general mode of propagating Dahlias is by cuttings, and in order to obtain these, the old roots are put into a state of growth early in the season, and the young shoots which spring from them, and which are produced in abundance, are employed as cuttings. Some extensive growers excite their Dahlia roots as early as December or January, and continue taking cuttings off them as long as they continue to afford them, or until a sufficient number of plants of the desired kind is obtained. For ordinary purposes, the beginning of March is a good time to put the rest into a situation to grow, which is usually done, when on a small scale, by putting them in light mould in larger pots, placing them in a hot-bed, frame, vinery, plant-stove, or in any other convenient place where there is a temperature of about sixty or sixty-five degrees, or even more. Upon a larger scale, the old roots are placed together, without potting, upon a hot-bed, shaking in a little light, sandy mould, or rotten tanner's-bark, amongst them. In either case the young shoots soon begin to appear, and should then, as well as before, be occasionally sprinkled with water. When the shoots are from two to three inches in length, they may be cut off close to the old tuber, but not so as to injure its top or crown, because many more shoots will arise from it if required. The cuttings are prepared by cutting the shoot smoothly across under the first joint, and without shortening the leaves, planting it in the smallest sized pots (thirties) into a light soil, chiefly composed of decayed leaves and sand, or, as many practice with success, in pure white sand alone. The sand should be well wetted, and the cutting inserted just as far as will enable it to stand upright, for with most other cuttings, the shallower they are planted the better. When the cuttings are so planted, they should be plunged into a brisk bottom heat, covered with a hand glass, and regularly shaded; whilst in this situation they should be regularly watered, but not over the leaves, and kept close shut up, unless to inspect the plant. In ten or twelve days they will have sufficiently rooted to be taken from under the glasses, and should be accustomed to the air by degrees; when they will stand without flagging or drooping their leaves, they may then be transplanted into larger pots, and into richer mould, the sand being previously shaken from them. They must now be accustomed to a lower temperature, and progressively hardened, by removing them from the propagating pit or house to other situations, unless they will stand the air and temperature of a close frame or cold pit; but in these they will require to be covered at night with mats till May or June, when they must be accustomed to stand the open air, so that they may be planted out where they are to flower by the middle of the month. Sometimes Dahlia plants are forward enough by the first of May to be planted out, but as it would be unsafe to expose them too early in the season, it would be well, if planted too early, to cover them with hand-glasses for a week or two, or in want of those with pots, which being left off during the day, and put on during the night, is the best substitute for the former. Cuttings are also taken off the plants during the growth, any time from June to September. The shoots best calculated for this sort of propagation are those small lateral branches, which in general abound upon the plants, that may be successfully struck by being planted in sand in small pots, and placed behind a wall or other shaded situation, and otherwise treated as above.

The process of multiplying by dividing the root is simple, and requires nothing beyond the careful separation of the tubers, each piece having a portion of the crown of the root attached to it, in which there are two or more eyes or buds, without which they would not grow.

The process of increasing by grafting is applicable not only to Dahlias, but to most strong growing herbaceous plants having solid stems and large tuberous roots.—*Horticulturist.*

Early Spring Flowers.

We have noticed already a few of the most useful trees and shrubs, with which to adorn the ground and shelter the dwelling-house. There is something more looked for. Gay blooming plants and fragrant roses must cheer the inmates and please the visitor. The neat beds marked out on the lawn must be planted with choice flowering plants, which by a careful and judicious selection, with proper treatment, would add immeasurably to the aspect of the place. Herbaceous or border plants, are those which are perennial and not woody in their structure. They form a thick root-stock, the buds throwing up stems at the approach of spring, which bloom and decay, leaving the plant still more vigorous for the following season. These are among the most useful of our hardy garden plants; they require vero little care or attention when once established, and furnish a profusion of choice flowers from April till December. This country is peculiarly rich in this class of plants; our woods and swamps are brilliant in spring and summer, with these voluntary offerings of Flora, to much neglected to give place to the more boasted flowers of China, Japan or other distant countries. Take, for example, the *Physalis Alkekengii*; it has been cultivated in the botanic gardens of Europe for years, as a border plant; yet at this time, when the rage for novelties is very brisk, we have it and its congeners brought up as something not well known. There are so many local names attached to plants now-a-days, that when a man runs one down and captures it, it starts again under a new name, and he renews the chase; the two when captured and domesticated, prove to be one and the same. Thus, the HOP TREE, we all knew in our apprentice days, as, *Ptelea trifoliata*; it has been planted for a century and a half in European Arboretums, but when it was started for a run last year, down east, all our arboricultural friends came with the query, have you this new hop tree?—this famous hop tree—this much extolled hop tree! What is it? what are its characteristics, &c., &c., were the successive inquiries. At length it is known as *Ptelea trifoliata*, an indigneous tree, and the spell is broken, an old friend under a new name. No disparagement to the tree. Nor is the Japan Dielytra much more beautiful, though a charming and useful plant, than many less notorious plants of a similar character. Our Cordydalis and Dicentra cucullaria, are both very pretty, though overlooked.

The Dictamnus or Fraxinella, red and white, are still somewhat popular, though rare in commercial gardens. And the favorite Dodetheon cannot compete with its more gaudy rivals of other climes. The Neapolitan Violet is the leader among fragrant flowers of winter and Spring; the time-honored humble Mignonette can scarcely hold up against it. At this time the old fashioned Daffodil, with hanging head and crimpled nectary, revisits us. Who ever recollected it was there? The Cowslip of Britain and old English Primrose, are almost naturalized among us, and the little sihgle blue Violet is still worthy a nook in the garden.—The Columbines, not forgetting our Canadian favorite, are among the first herbaceous plants of the season, after the Hepatica, in blue and white, which even now enlivens the woods in company with the Trailing Arbutus or *Epigea repens*, which refuse to be petted on any terms. These herbaceous or border perennials, are worthy more notice and consideration than they receive. They require no nursing, no special culture, nothing but good soil, good air, and place to expand their beauties.—*Country Gentleman.*

The Cherry in Illinois

Mr. John A. Kennicott, writes thus to the *Prairie Farmer* relative to the culture of the Cherry in Illinois:

"Of all fruits the cherry has proved the most unsatisfactory in our grounds. There have been sprinklings of common pie cherries and Morellos, a fourth of a crop of May Dukes now and then, and once or twice a fair show of Black Tartarians and the like—but never half enough for the birds, on over a hundred trees of age to bear, and now I have scarce twenty alive of those planted before 1857. West of me, the hardy sorts have done better, and much better a little south, on soil much drier than mine and mostly light colored. With our present knowledge there is no use in planting Hearts and Bigarreaus up this way, and even south they have not done very well, in the prairie regions, though I look to see them do better far south in the timbered region of Illinois. A good soil for peaches is a good soil for the best cherries; but mind, it *must be dry* at bottom, and I am inclined to believe the cherry is still better in a good stiff pear soil. It is believed that the Mahaleb stock will stand more wet than the Mazzard, and worked low, so as to bury the whole stock at planting, it is doubtless hardy enough; but if you will have standards, seedling Morellos and Kentish stalks must be used, and besides being hardy these stand wet much better than Mazzards, and often live a long time, south, on ordinary dry soil. I would, however, strongly advise treating every choice cherry tree as a dwarf here, and giving it a head, based on earth, far south. The Kentish family, including Dukes, &c., and the Morellos are the only hardy sorts.—The little Early May seems to bear abundantly in some places north, and common Morellos south—all better than no cherries. Early Richmond is in great demand now, though I am not aware that it has been thoroughly tested here.

HORTICULTURAL NOTES.

Summer Pruning.

A Mr. Sweet of Triftonburgh, Mass., writes to the Boston *Cultivator*:

"Trees should never be pruned in the fall, for the reason that the stock dries up, the bark curls from the stock, lets in the water, and injures the tree, and it never heals so well as when removed at the proper time. To prune in early spring is better, but not the best time. Limbs are removed at this season of the year, when the sap first begins to start, also injures the tree, for the sap rushes with great power to every part of the tree, which will cause the wound to bleed. The tree, or limb, will turn black, and often the tree will die. I am satisfied that the best time to prune apple trees is from the last of June to the last of July. At this season of the year, that strong flow of sap begins to subside, the tree is covered with foliage, which is a great help to the wound in preventing its drying and cracking."

He says also in relation to grafting:

"Early grafting is best—from the last of March to the last of April. Scions should always be cut before the sap starts."

Fruit Culture in Northern Iowa.

The Messrs. Horr & Beebee of the Dubuque Nurseries have sent us a pamphlet, containing lists of fruits adapted to the climate and soils of the northwest and also a treatise in a condensed form on fruit growing. In this, we notice that James G. Soulard suggests that as tests of the hardiness of fruit trees, the intensely cold winters of 1856 and 1857 should be taken and the varieties that withstood them should be put down as perfectly hardy. They were the most destructive to fruit trees of any of the last twenty years. This gentleman has originated several seedlings, and names the *Soulard* as the best of all apples for Iowa.

Vitality and Germination of Seeds.

CONDENSED FROM THE LONDON GARDENER'S CHRONICLE.

No subject of vegetable physiology is more interesting, both for theoretical and practical reasons, than the power which seeds undoubtedly possess, under certain circumstances, of preserving their vitality for an apparently indefinite period. It is doubtless true that many of the statements on this subject, to be found in books, are apochryphal; but, certainly some are founded on fact. None among the so-called instances of this excessive longevity have excited more doubt and discussion than what is called "mummy wheat;" that is to say, wheat taken from mummies, and therefore of the highest antiquity, which has grown when sown. We have never succeeded in satisfying ourselves, however, that the seeds from which such wheat is said to have been produced was really taken from mummy-cases. There is always some defect in the evidence. All such statements may be true, but there is no proof that they are so; and when we are told that onions taken from similar receptacles have also grown—*which is impossible*—we may be pardoned for requiring very decisive evidence before we accord our belief in those prodigies. The history of this wheat was given by Mr. Martin Farquhar Tupper, a most exact and conscientious man, in the London *Times*, of September, 1840; and to that gentleman we are indebted for the additional facts which we are now able to communicate.

Sir Gardiner Wilkinson, when in the Thebaid, opened an ancient tomb (which had probably remained unvisited by man during the greater part of three thousand years), and from some alabaster sepulchral vases therein, took with his own hands a quantity of wheat and barley that had been there preserved. Portions of this grain were given to Mr. Pettigrew, who presented Mr. Tupper with twelve grains of the venerable harvest. In 1840, Mr. Tupper sowed these twelve grains, and, to show the care with which he preserved their identity, we shall quote his own account of his proceedings thereupon. "I ordered," he says, "four garden pots of well-sifted loam, and, not content with my gardener's care in sifting, I emptied each pot successively into an open newspaper, and put the earth back again, morsel by morsel, with my own fingers. It is next to imposible that any other seed should have been there. I then (on the 7th of March, 1840), planted my grains, three in each pot, at the angles of an equilateral triangle, so as to be sure of the spots where the sprouts would probably come up, by way of additional security against any chance seed unseen lurking in the soil. Of the twelve, one only germinated, the blade first becoming visible on April 22d; the remaining eleven, after long patience, I picked out, and found in every instance that they were rotting in the ground, being eaten away by a number of minute worms. My interesting plant of wheat remained in the atmosphere of my usual sitting-room until change of place and air seemed necessary for its health, when I had it carefully transplanted to the open flower-bed, where it has prospered ever since. The first ear began to be developed on the 5th of July; a second ear made its appearance, and both assumed a character somewhat different from all our known varieties. Their small size and weakness may, in one light, be regarded as collateral evidence of so great an age, for assuredly the energies of life would be sluggish after having slept so long; however, the season of the sowing—spring instead of autumn—will furnish another sufficient cause. The two ears, on separate stalks, were, respectively, 2½ and 3 inches long, the former being much blighted, and the stalk about 3 feet in height."

"If, and I seen no reason to disbelieve it," continues Mr. Tupper, "if this plant of wheat be, indeed, the product of a grain preserved since the time of the Pharaohs, we moderns may, within a little year, eat bread made of corn which Joseph might have reasonably thought to store in his granaries, and almost literally snatch a meal from the kneading-troughs of departing Israel."

Here we have no link lost in the chain of evidence. Sir Gardiner Wilkinson himself opened the tomb, and with his own hands emptied the alabaster vase; of its contents he gave a portion to Mr. Pittigrew, who gave it to Mr. Tupper, who himself sowed it, watched it, and reared it.

On the contrary, it is alleged that all the grain taken from the Egyptian urns are perfectly indurated, and possess every appearance of having been roasted. A correspondent says: "I remember, in 1814, to have seen in the hands of the celebrated Egyptian traveler and antiquary, Denon, at Paris, several specimens of wheat which he had extracted from urns found by him at Egyptian Thebes, when, as the head of a scientific body, he accompanied Bonaparte's expedition to Egypt. He told me that, immediately on his return to France, he had, in order to satisfy the curious, carefully tried every possible experiment with discovered grains, by sowing some in autumn, some in spring, some in the open air, some in hot houses, some steeped previously in water, the rest in its natural state, if that could be called natural which had a most unnatural appearance, having every show of having been calcined, of which fact M. Denon did not entertain any doubt. Be it observed that Denon did not try this experiment with the produce of one discovery, but of many. * * * I want to know who can prove the growth of any mummy-wheat in this country? Let us know all the circumstances. Who discovered it? What are the circumstances of the discovery?—Where was it made? When? The date is important. Let him account for it in the various hands through which it passed till it was deposited in the earth. Let him show us how it was secured against the possibility of fraud in every stage of its custody during this interval; how secured during the trial of the experiment; how many grains were sown; how long it was before they came up; how many came up; and above all, I repeat, what security he had against the hoax of some mischievous person during this part of the experiment. It is nothing to show that he obtained a stem of a peculiar character, if the existence of that kind of ear was known before. All the mummy-wheat I have seen is of sorts common in Egypt at this day. Has any mummy-wheat ever been raised in Egypt? I believe none. I have always understood that there is not in the world a cleverer fellow at bamboozling a traveler, and accommodating his tastes by the preparation of discoveries for him, than the Arab guide; that the Roman antiquarians, and the venders of antiquities, and the peasants of Pæstum, do not surpass him in intelligence of that sort. I beg to say, that I do not in the slightest degree question the strict probity and sincere convictions of those who have found or reared certain wheats to which they have given the name of mummy-wheat; but I do suspect that somewhere there is a mistake."

Mention is made of an ear of wheat having been exhibted at the Newcastle Farmers' Club, which was supposed to have been grown from seed found in an Egyptian mummy-case. Statements of the same general character have been put forth elsewhere.—"I lately met with one," says a writer in the *Botanical Rambles*, published under the direction of the Society for promoting Christian Knowledge. "Two figures are there given of the kind of wheat alluded to, and an interesting and very marvelous inference is drawn from the presumed accuracy of the facts detailed. It is asserted that, in Egypt of old, it was no more uncommon to meet with seven ears of corn on one stalk than seven kine feeding together in one meadow! The variety has proved to be nothing more than an old and well-known kind of 'Revel wheat,' called 'Egyptian wheat,' and which I have occasionally seen cultivated in this neighborhood. I presume this variety has been so called in allusion to Pharaoh's dream, when he fancied he saw the anomalous fact of one stalk bearing seven ears.—This variety does not, in reality, bear more ears than usual, namely, one only; but it has several of the spikelets so much elongated that they bear more grains than usual. It is this circumstance that gives it the appearance of a cluster compounded of several ears. It is a monstrocity which occasionally returns, under culture, to the ordinary conditions of the ear; neither is it, when most prolific, considered to be a variety of any great value—Now, it is the mere name of this variety which has misled many to suppose it identical with the kind of wheat that was raised in the celebrated experiment recorded in the *Gardener's Chronicle* for 1843, but which is there stated to have been the 'Bellevue Talavera' of Colonel Le Couteur. I can fully confirm this, because I had six grains from the specimens raised by Mr. Tupper, and grew them in company with several varieties of wheat in my garden. Among these, were plants of the 'Bellvue Talavera,' and I had ample opportunity of comparing them with the descendants of the 'mummy-wheat.' This variety was specially remarkable for exceeding in length of straw, and for flowering much earlier than any of the other varieties in my garden. In this, and in all other particulars, I could not observe the slightest difference between the Bellevue Talavera and the mummy wheat; both, also, were attacked more vigorously than the rest by rust and mildew. If, then, the single seed reared by Mr. Tupper was really deposited in the catacombs during the time of the Pharoahs, the wheat of Egypt was not the existing Egyptian wheat, so far as this experiment may be considered decisive. But I have long suspected the possibility of a flaw in the testimony upon which this one grain is supposed to have been so old as Mr. Tupper and Sir G. Wilkinson believed it to be. Application was once made to the latter for specimens of mummy-wheat, in order that it might be tried among a series of experiments 'on the vitality of seeds,' which have been in progress for a few years, under the superintendence of a committee of the British Association. The person who had been requested to apply to this gentleman was furnished with a sample by himself. Upon his proceeding to share the grains among the parties experimenting, he was surprised to find them intermixed with grains of maize, a plant of the New World. This of course, led to further inquiry, and the conclusion arrived at was, that the sample had most certainly been tampered with before it came into his possession. Without presuming to deny the possibility of mummy-wheat retaining its vital powers for three thousand years, I must consider the above fact, coupled wilh the strange misapprehension that has arisen respecting the origin of our 'Egyptian wheat,' to throw an amount of suspicion upon the accuracy of the results which Mr. Tupper considered he had obtained, which makes it necessary the experiment should be repeated before we can feel satisfied that a grain of mummy-wheat has really germinated in our own times."

(To be continued.)

Harrowing and Rolling Wheat.

It is a well established fact, that harrowing and rolling wheat in spring, are very beneficial to the crop, and most destructive to those "pests of the farm" which mar the hopes of the farmer. The pupa of those formidable insects, the "wheat" and "Hessian" flies lie buried in the earth, near the roots of the young plants, at the depth of about one inch from the surface, when they are torn up by the harrow, and exposed prematurely to cold weather, myriads of them are destroyed. Besides the good done in this way, harrowing breaks lumps, fills up cracks and fissures, and softens the soil around the roots of the wheat.

About the time when this operation should be performed, a great number of annual weeds will be beginning to show themselves; these will be torn up and destroyed. If clover or grasses are to be sown on the wheat, it is necessary to harrow in order to provide a good bed for the seeds. When the soil is in proper order, rolling the ground after it has been harrowed, will be of the greatest service, as it compresses and pulverises the soil, and makes a smooth surface for the scythe, cradle, or reaping machine. It will be necessary to be careful lest the wheat should be torn up by the harrow; to guard against this evil, it will be proper to use an implement with very short teeth. E. MASON.

Food for Cattle.

The compound used here for fattening beasts and keeping sheep in a growing and healthy state during the winter months has been one part Beans or Peas (old if possible), one of Linseed, which I prefer to oil-cake as it contains all the oil, one of Barley, and one of Wheat, all mixed and ground up together. This combination I believe to be equal to any artificial preparation now sold at four times the value, particularly if a small quantity of some warm seed be mixed with it to aid digestion. We have here gluten for flesh, starch for fat, and pure oil for burning in the lungs to keep up the animal heat. Judging from the effects, I think this compound to be more valuable than oil-cake, and without the adulteration. It is given dry with cut Turnips to the fattening beasts, to be moistened by the saliva. This I consider tends to a more perfect digestion than if mixed with warm water, and at the same time it may be said that as the animal chews the cud there can be no want of saliva. The quantity given to sheep has been at the rate of half a bushel to one hundred sheep, merely sprinked over the Turnips as a condiment and corrective, as we use pepper for our Turnips; little enough certainly, still it has the desired effect. I feel certain that nothing is gained by stinting sheep in winter; where we gain one by saving in food, we lose doubly through leanness and want of vigour in spring. I have no scouring.—*Sigma, in The London Agricultural Gazette.*

Sows and their Young.

W. P. P., of Binghampton, N. Y., writes to the *Homestead*, that if the New England rum is like that which is sold in New York, there would be considerable trouble in getting hogs to touch or taste it. But he says:

"On appearance of the disease I give the sow a piece of salt pork, say a pound or more. I have no trouble in getting her to eat it, as she will devour it immediately. This may look a little hoggish for hog to eat hog, but not so much so as the cause, and it settles the matter. I tried it last fall, with an English rabbit, that I caught eating her young. I gave her a piece of pork about as large as two fingers. She ate it, and that was the last of her eating young rabbits.

Some of your readers may be inclined to enquire if that was not the last of Mrs. Doe. Not so; she did well, and I have her yet.

This remedy I learned from an old colored woman that formerly lived in our family."

STATE AGRICULTURAL COLLEGE.

REPORT

ON THE PRESENT STATE OF THE FARM, AND ITS ADAPTATION TO EDUCATIONAL PURPOSES, WITH SOME SUGGESTIONS ON ITS MANAGEMENT, MADE AT THE REQUEST OF THE BOARD OF EDUCATION.

BY R. F. JOHNSTONE, EDITOR OF MICHIGAN FARMER.

The undersigned being requested by the Hon. W. J. Baxter, a member of your Board, on Thursday, the 31st of March, to visit the Agricultural College at Lansing, and to make a report to be submitted to you on the 6th of April at a meeting to be held at Tecumseh, respectfully reports.

That a visit was made to the Agricultural College on the 2d day of April, and that with the aid of Professor Fiske, and Mr. H. Hodges, who has charge of the work on the Farm, an examination of the condition of the Institution was prosecuted as far as the limited time permitted would allow, and the results are submitted as follows:

THE FARM AND ITS PRESENT CONDITION.

It is known that the College farm is divided into two sections by the Cedar river, which flows through it at one end. The portion of the farm north of the Cedar river, is bounded to the north by the plank road, and on it are located all the College buildings, Professors houses, barns and sheds belonging to the establishment. Upon this portion of the farm also has been expended the greatest amount of the labor. As yet it has been very irregularly divided, and it is almost impossible to make it understood without a personal survey. However, for the sake of arriving at some definite understanding, with regard to the land, I have taken the lots as they lie at present, and numbered them.

No. 1—is a piece of stiff clay land, lying at the extreme west point of the farm, irregular in shape, running to a marsh to the northward, and cut up by roads, unfenced, and supposed to contain from 15 to 20 acres. No improvement has as yet been attempted here, and the land as yet lies unproductive. It will eventually be a valuable tract, but will probably remain untouched for the present season, at least until the busiest time of harvesting is over.

No 2—is the lot on which three dwelling houses for Professors are located; it contains about fourteen acres, and is seeded with clover, and will remain in this condition for the present year, and will be depended upon for a hay crop. With the exception of setting off plots for the gardens and yards necessary to be attached to the Professors' houses, this lot will remain in the shape it now is permanently, being bounded on three sides by roads.

No. 3—is the lot in which is located the garden, and is also that which will probably be used for nursery and for general horticultural purposes. It is said to contain 21 acres. One of the houses for the Professors is located here. It is at present disfigured by the remains of the sheds and brick-yards, which should be removed at an early day. The whole lot, with the exception of a few acres used for raising vegetables, is rough, and much of it requires to be broken up for the purpose of being subdued, before it can be used or improved. This lot extends from the road to the river. Three or four acres along the river bank, can be cleared this season in time to be used for a turnip crop, and if possible some portion for the more valuable root crops.

No. 4—is the lot in which are located the College buildings; it is irregular in shape, and has been seeded with clover, and will be mowed for hay. It contains altogether, 14 acres, but out of this, yards and unproductive pieces about three or four acres must be subtracted. This also has yet to undergo a course of working before it can be said to be got into shape, and can even be thoroughly laid down with the best grasses for lawn purposes.

No. 5—is a large irregular tract, which stretches eastward along the plank road from the College avenue. It contains from 35 to 40 acres. This has been well broken up in part. A portion is occupied with apple trees, which were set as part of an orchard. These trees were examined, and a large proportion of them were found to be dead. The trees which are alive should be taken up to fill the vacancies existing in the orchard lot, No. 6, which will be mentioned immediately, and this whole lot should be put in corn and potatoes, as it is now in a very fit condition for these crops. Part of this lot is low, but it is drained partially, and to those who know what this land was two years ago, its present condition is certainly evidence of great energy, and of a large amount of work being done. The field is not entirely cleared, but the corn and potato crop is preparatory to having this field laid down with grass, that it too may be getting ready to undergo another series of improvements, while other portions of the farm are being cleared. Of this field about 30 acres will be in corn, the rest in potatoes.

No. 6—is a stiff seven acre field, partially fenced, very well planted with young apple trees, in a fair thrifty condition. The soil wants a deep plowing and breaking up, and it is proposed to do this now, before the roots of the trees spread, and to take a crop of the short King Phillip corn off this piece of land, leaving wide intervals for the trees. The house for the farmer is located in this orchard lot.

No. 7—is a small lot of three acres of pasture, with the stumps remaining, which it is proposed to let alone for the present, on account of the redivision of all the land on this side of the river and the College avenue.

No. 8—is a lot also irregular in shape, in the rear of the orchard and lot 7; is said to contain twenty acres. It has been chopped and cleared, and a crop of wheat was taken off it last year. It is proposed this year to sow it with oats, and to seed it heavily with clover and timothy.

No. 9—is a long, irregular shaped strip, which is now in wheat, and said to contain seventeen acres. This should also be seeded down.

No. 10—is a piece of forest in the corner close to the river, said to contain five or six acres.

No. 11—is a strip of interval land, liable to be overflowed by the river, as yet unimproved, but which should be put under improvement during the next year.

The above eleven lots include the whole farm on the north side of the river, and it may be well to say that the numbers are only made here for reference. They do not exist in any plot or plan, for none such has been made. A rough plot of the farm was furnished me by Mr. Williams, the late President, which has been of much service, but so far as I could learn, none of the fields or lots had ever been surveyed, and I am entirely unable to give detailed or precise statements of the boundaries, or areas of any part of the farm.

Across the river, a piece of land was cleared last year, which is now in wheat, of seventeen acres in extent. This will also require to be seeded; and there is another piece partially cleared, which will be sown with oats and millet this season, of about eighteen acres in extent, if it be possible to get the work done in time. These crops all have a reference to getting as much return as possible from the land whilst it is being brought into a state fit for a permanent system of cultivation.

Beyond these wheat and oat lots, lies a large tract of seventy-five acres, from which the live timber has been chopped, and the logs and brush are in windrows ready to burn at the proper season. The work on this, as on the rest of the farm, has been done solely by students, under the direction of the Farmer and the President, and is very creditable to all, the whole job being done in a most workmanlike manner. The field will be burnt over, and put in wheat for next season.

The above description is a fair statement of the present condition of the several portions of the farm; and now arises the question of what should be done to render it available for the purposes for which the State has designed it? and how it can be done with the least outlay, and most economically within the shortest period?

In considering this part of the subject, it must be borne in mind that the College is a Michigan institution, and what might be proper in other States, or in other countries, is not suitable here, and that in establishing an institution which shall serve as an example in this State, our own system must be combined with only what is fit to be adopted into it. Most of our farming operations consist of what is called *Mixed Husbandry*, and most of the farms in the State are composed of tracts of land containing a certain proportion of woodland, and generally from sixty to two hundred acres of tillable or cleared land, with the buildings and fixtures necessary for the animals required for labor and for dairy or feeding purposes. I think it should be the first duty of the State Institution to plan out a model farm of such a size, as would enable the most moderate farmers to watch its progress with profit to themselves, and which in all its operations would be a standard and guide for the pupils, and also the department in which the improved practice adapted to this State, would be carried out in all its details. Such a farm of itself should be somewhat similar in size and in division to the majority of the farms of Michigan. Its labors and its improvement should be on such a scale as would be immediately useful. After an examination of the State farm, I have come to the conclusion that there is every facility now existing for the immediate establishment of such a farm, and the portion which I would

point out as suitable, at the earliest date, for this purpose, is that section lying between the plank road and the river. In the first place, it is sufficiently divided from other portions of the farm, to make it a section by itself; it is also contiguous to the boarding house and college buildings; it is also of easy access for practical demonstration; its surface and soil are of such a description as to permit the improved tillage and tillage implements to be employed upon it at an early day; and to illustrate drainage, subsoiling, trenching on a scale equal in extent to any work of the kind that will be undertaken in this State for some years, with or without the College. This piece of land, with the out-fields, such as those lying around the college buildings, the garden, and others on the north side of the river, could unquestionably be made to afford the very best practical lessons to the students; and it must be remembered that the scale on which these lessons would be taught would be neither so large as to be beyond their reach in practice at home, nor so minute as to be regarded only as a toy model, good enough in theory but of no service in every day life.

Of the proper method of dividing up such a farm, I will not at present enter into the details, as that must necessarily be committed to whoever may carry out the plan, if such a one should be adopted.

In relation to the land on the other side of the river, the clearing operations will fully occupy the attention and strength of the labor of the students for several years to come. But whenever enough of clearing is done, and the land is fit, here is where a *dairy farm* on a scale of magnitude not exceeding one hundred or one hundred and fifty acres should be established, with an orchard of the various kinds of fruit which may be found best adapted to the climate, of an extent not less than fifty acres, in addition, with fruit houses and all the appurtenances for preserving the fruit for marketing in the best and most approved methods. As the land got still farther cleared, beyond this dairy farm should be located the great Stock Farm, on a large enough scale, to prove instructive to the students, and at the same time profitable to the institution. These two latter departments, of course are only pointed out as those portions of the system, which may be easily worked out with time and the growth of the institution, and I only hint at them now, for the purpose of defining the general plan or system which should be followed out, so as to make the farm fulfill the role which it was designed to occupy in the establishment of a school of agriculture. As yet no plan, in fact, no sketch of a plan has ever been submitted, and whilst this want of a plan existed, no estimate of income or expenses could be made. With a definite end in view, it is not difficult for the architect to plan his edifice and to detail the specifications from which correct estimates may be made.

THE FARM BUILDINGS.

The only buildings on the farm used for farm purposes are a brick structure and some very rough sheds, the latter erected by the parties who had the contract for making brick for the buildings. The brick barn accommodates the work horses and cattle, but is of little value for storage of forage crops. The sheds are used for the storage of tools, but are in the wrong place, and are too inconvenient in location to be suffered to remain where they are, even if they were not almost disgraceful to the appearance of that portion of the farm, which first meets the eyes of visitors and others coming out of Lansing.

The brick barn would probably continue to be used as it is for the present summer.—There is needed, however, a complete range of sheds, or structures of some kind, for the storage of wagons, plows, and all the implements upon the farm, in some location convenient to the boarding house. To supply this deficiency for the present, it is proposed to have the materials of the sheds above mentioned, used in the erection of a tool house that will answer every purpose for one or two years.

There will be needed, also, before next winter, a range of feeding sheds, with stalls or boxes for cattle and sheep, as there will be much stock that the economy of the farm will require to be kept. But the plans and location of these must be left for future consideration. These, together with structures for the protection of hay, straw and stalks, can, however, be erected for present use at a very moderate expenditure, and thus leave the construction of the permanent farm buildings to a period when the actual development of the institution will indicate that such structures are a part of the necessary apparatus of instruction.

In the garden there should be a neat structure erected for a tool house, seed house, and store house, in which every article connected with garden operations should be stored when not in use. There is now nothing of the kind.

Much of the work necessary to be expended in the erection of all the necessary structures, can be performed by the students, as I am informed, so that the cash outlay for building would be light for the present year and probably for the next year also.

THE INCOME OF THE FARM WITH ESTIMATES FOR TWO YEARS.

Of course, in estimating for the value of the produce of such a farm, in its present condition, every allowance must be made for the fact, that there is no young live stock on it of any kind whatever. Its present stock consists of four yoke of oxen, in fair condition, four horses, and five milch cows. The present or coming season, is the first on which the farm will be in a condition to feed its own stock. The only pasture that will be required; is that which must be reserved for the cows, and until some of the crops are harvested, they will have the use of the large fallows, which will be sufficient, so that in reality, the expense will be light, whilst the milk of five cows, at an average of six quarts per day, at three cents per quart, should be worth $270 00.

The several fields, so far as can be judged by the slight survey which was afforded, may probably yield somewhat as follows:

Field No. 1, will yield nothing this year	
" No. 2, about ten acres of clover hay, 1 ton per acre, worth $5 per ton	$ 50 00
" No. 3, the garden lot, value of vegetables and root crops, estimated at	300 00
" No. 4, the college lot, 17 acres of clover hay at $5 per acre or 1 ton	85 00
" No. 5 & 6, 32 acres of corn, at 35 bushels per acre at 60 cents	672 00
7 acres of potatoes at 150 bushels per acre at 25 cents per bushel	262 50
" No. 7, 3 acres of pasture for cows	
" No. 8, 20 acres of oats at 25 bush. per acre at 25 cents per bush.	125 00
" No. 9, 17 acres of wheat, and 17 acres across the river makes a total of 34 acres at 15 bush. per acre, at $1 per bush.	510 00
On the lot across the river there will be 15 acres of oats put in rather late, estimated at 20 bush per acre at 25 cents per bush	75 00
2000 bushels of turnips and roots at 10 cents per bushel.	200 00
The value of 50 sheep at $2.50 per head	125 00
40 hogs fed from swill of boarding house, and on refuse corn, 200 pounds each, 8000 lbs. at 5c. per pound.	400 00
There should be a number of young cattle procured during the fall, to feed off the straw, corn stalks and be fattened for market, producing three head, worth $50 each of clear profit from the lot.	150 00
This income principally used in the boarding house at the ordinary market rates is	$3,224 59

I have made here no estimate of the large amount of hay, straw, stalks, pumpkins and other coarse produce used in making manure. To make this pay, there must be some outlay for live stock, but which will pay for itself in manure, meat and growth if handled with a view to profit.

Against this will be the value of the student's work, whatever that may be, and as neither the price nor the number are yet fixed, no estimate can be made

Much of the labor of the students also should be charged as yet to the permanent investment, which is constantly being made in the improvement of the farm from a piece of wild-woodland to an estate of the highest value. No record or account of the kind having been kept, it is impossible to say what has been the gain. It has certainly been very great so far, but the actual results, could not now be given without a fair inventory was made of the whole real and personal property, and a fixed value set on each article in its present state. I would certainly recommend that this be done at an early date, or that it be postponed until the end of the present term.

THE BOARDING HOUSE AND ITS EXPENSES.

The Boarding House needs repairs. The contractors who did the work on these buildings must have been totally unfit to be trusted to complete such a structure. There is at present not one room in which the plaster has not fallen from the walls and ceiling. The roof, also, which is a flat one, will have to be replaced by one better suited to such a building. The condition of things evinces a most disreputable lack of either competency or fidelity on the part of those who had the superintendence and the performance of the work, and has created much loss, and been the means of injuring, in some degree, the standing of the institution in the minds of a large number of persons who have witnessed the results of the badly done work.

There appears to be some confusion as to getting at a fair estimate of the exact cost of the boarding house; but so far as I could learn, the actual cost of board may be averaged at $2 25 per week. With regard to the furniture, as a matter of course, it is subject to the ordinary wear and tear to which young collegiates will submit it. But in this regard, it should be the duty of the Steward to deliver the room and furniture in good order to the students who are to occupy it, making an inventory of the articles when delivered, and when any article is broken, lost, or injured materially, the value of the loss should be charged to the students who occupy the room. The institution should not be permitted to suffer loss from the wilfulness, carelessness, or neglect of the young men who are admitted to receive its benefits.

The labor of the students is another subject which requires attention. In the work to be done on the farm, the labor of the student, at its highest rate, is not worth any more than what such work could be done for by an able bodied man, accustomed to do farm labor. The College has paid at the rate of ten cents per hour for the best hands. This I regard as too high, it being equal to $1.00 per day exclusive of board. Good ordinary farm hands can generally be had for less, except in the busy seasons of securing the hay and harvest crops.

The total estimated expense of Boarding House, and the labor of the students, for the coming year are summed up as follows:

Ninety Students, for 35 weeks, at $2.25 each	$7,087 50
" " whose work for 210 days averages 3 hours per day at an average rate of six cents per hour	3,402 00
This would leave to be paid by the students	$3,685 50
Add to this the cash value of the farm products	3,224 60
	$6,910 00

Without allowing any amount for the labor invested in clearing and increasing the actual value of the land, and which in some parts of the farm has raised the actual value per acre from the first cost of $15 to at least $25 to $30, it will be seen that at a very moderate estimate the farm may be expected to very nearly sustain the wants of the boarding house for the present year. Perhaps it may no do so well, and again it may do more.—Much will depend on the season, and on the methods pursued with the crops, as well as other incidental circumstances which it is unnecessary to enumerate.

THE INSTRUCTION OF THE STUDENTS.

The subject of the education of the students does not exactly come within the scope of this report, but as the request was made that I should report on every matter of interest connected with the Agricultural College, a few suggestions on the educational department may not be deemed out of place.

For the two years which the College has been in operation, the educational department has consisted of the Professor of English Literature, the Professor of Mathematics, and the Professor of Chemistry, and the President, who, being Superintendent of the farm, of course instructed the students in the theory and practice of Husbandry. The advance of the several classes now renders it imperatively necessary that preparations should be made to give instruction in other branches. From the studies which the law requires shall eventually be taught, it would seem that a selection should be made, which would serve to prepare students most judiciously for those which must be taught another year. The College cannot possibly perform its functions without the services of an instructor in Surveying, Mechanics and Civil Engineering.—At present, also, the College has no Professor of Horticulture, no teacher of Botany, none as yet in Veterinary practice and science, yet these are divisions of the educational department for which the student should be prepared, by an elementary tuition in Vegetable and Animal Physiology, and Comparative Anatomy, and which it should be esteemed an absolute necessity to afford at any reasonable cost.—The preparatory instruction in Horticulture, could be limited for the present to the single branch of Pomology, a correct knowledge of which is in a great degree needed by all orchardists, and would be of much service to the State at present. From this also could be developed, gradually, as the College became more fully perfected, a full practical Horticultural department, embracing every subject pertaining to that study, practically and theoretically.

These are the suggestions which I have to make. It is for you to determine how far the means placed in your hands by the State will permit you to act upon them. I would say, however, that there is no recommendation of any subject contained in this report that I do not consider an actual necessity of the Institution, and which its own progress and the progress of the young men who are dependent upon it for the completion of their education, do not absolutely force upon the minds of those who have given attention to the subject of a correct and complete system of practical and theoretical education in all that pertains to agriculture.

All which is respectfully submitted.

R. F. JOHNSTONE.

—A post-office has been established at Coraville, Pike's Peak region, and Mathias Snyder, formerly of Virginia, appointed Postmaster. The contract for a daily mail service from Leavenworth to Coraville has been given to Ben. McCulloch and P. T. Ficklen. Extensive arrangements are being made by them for the transportation of passengers also.

☞ Mrs. Hayes, of Fort Edward, who pretends to have lived for the last two years without food, turns out to be an impostor. A committee of citizens was appointed to watch her, and have made a report in accordance with the facts. They found her well supplied with a secret store of crackers and corned beef.

NEW ADVERTISEMENTS.

JAMES DOUGALL, Windsor, C. W..Weeping Trees.
do do Dwarf Pears.
do do New Grapes.
do do Strawberries,
do do Fruit Trees.
M. S. RAILROAD,.....Change of Time.
WATERS, LATHROP & McNAUGHTON, Jackson, Mich,.....Ag'l Implements.
S. FOLSOM, Detroit,.....Wool Dealer.
R. L. HOWARD, Buffalo, N. Y.,...Ketchum's Harvester.

MICHIGAN FARMER.

R. F. JOHNSTONE, EDITOR.

SATURDAY, APRIL 9, 1859.

The Agricultural College.

Last week, the Hon. W. J Baxter, on the part of the Board of Education, tendered to us an invitation to visit the State Agricultural College at Lansing, and to make a report on the subject to the Board at its next meeting, which was to take place at Tecumseh on the 6th of April. This left us but a few days to make the visit, and as a necessity the report which was made had to be brief, and had reference more particularly to the farm, and the practical working of it with reference to its position as part and parcel of an educational institution, than to its other departments.

Our time was so limited that it was not possible to spare even a few hours to visit the capital, though within a ride of three or four miles.

At the College, which we have not visited since the period of its opening, we found many improvements and alterations, well worthy of note. At the time of the opening, the avenue leading from the plank road to the college buildings, was almost blocked up with stumps of large trees which had been cut down and cleared off. A few of them had been pulled up by the stump puller, but they were so massive that not even the appliance of the combined strength of four yoke of oxen could remove them from the position in which the stump puller had left them.—Instead of this rough approach, there is now a well graded road, with the timber cleared away, the stumps completely obliterated, and every thing appearing as smooth as though it had been prairie land, instead of the heaviest timbered soil in Michigan.

On the left of the road, where was a wet, low, marshy spot, with much heavy timber, there is now a field of a fair level expanse stretching for a considerable distance along the plank road, which was plowed last fall, and is now getting ready for a crop of corn, that we think, if rightly attended to, and the season will permit, will show a production well worthy of note. A large portion of this field has been tile drained. All the drain tile sunk by Mr. S. M. Bartlett, the Superintendent, who had charge of the place and the buildings for a time, has been taken up, as they were found to be so near the surface that they were a hindrance to the plow. The lot of ground is one which will eventually be a grand portion of the farm, for any purpose of cultivation to which it may be applied.

To the left lie the houses erected for the professors, and which are surrounded by cleared land, that for the most part two years ago was covered with brush and timber.

The lot on which the college buildings are located has been graded, most of the unsightly scrubs and brush have been cleared away, the surface of the ground has been levelled and graded, and as much of an approach made to subduing the wild vegetation, and introducing better grasses, as could be reasonably expected in the time. The land immediately in the rear of the buildings is as yet in a rough state, and here much remains to be done. A good, substantial bridge conducts the visitor across the river. This bridge was built by the students, and is a most creditable piece of work. On the south of the river, where the farm was an unbroken forest, there is now growing as fine a piece of wheat as can be seen on any new land, and if none of the usual drawbacks occur, we should not be surprised to have it give a yield of thirty bushels per acre, though it is at present only estimated at fifteen.

Besides the wheat, there is a large lot which was cleared late last season, that will be used for crops the present year. During the winter and fall there has been chopped down a clearing of seventy-five acres that will be burnt over the coming season, and which ought to be relied upon for a wheat crop, the most luxuriant and productive, in 1860. To farmers and practical men, it will easily be seen that there has been no want of energy on the part of the officers and students, and that as much has been accomplished out of doors, in the way of improvement, in many respects, as the nature of the ground, the seasons, and the adverse circumstances connected with the beginning term of the institution, as could be reasonably asked for, even in the working of a well managed private farm.

The great incubus of the institution seems to have been the buildings, which not only have proved to have been badly planned, and not well adapted to the wants of the institution, but were most miserably executed. No citizen of this State,—no friend of the institution,—can pass through them, without expressing a just indignation at the manner in which the liberality and good intentions of the State have been abused. The college building is now in good repair, but it has had a new roof, and been replastered from cellar to garret. The boarding house is now much out of repair, occasioned by the complete failure of the original work. It, too, must soon have a new roof, and be replastered from basement to attic.

The impression has been that the Agricultural College must of necessity be a failure, and even the President of the United States, in his veto of the bill to endow these institutions, seems to have been influenced by some such view. But we think that even in this instance of our own, with all the discouragements to which it has been subjected, there can be evidence shown that failure is not a necessity, but that on the contrary, where common sense, and a reasonable adaptation of means to secure desired ends, are used, the Agricultural College must work its way into popular favor, and its utility will be demonstrated far more effectually by a few years of well organized effort on its own part, than by any other means. That both educationally and in a mere farm point of view, the establishment has many wants, some of which are of pressing necessity, must be admitted, but these wants must be supplied in such a degree as will come within the scope of its design, and also of its financial means, so that it may not be pushed beyond its strength, and thus be toppled over as much by the misjudged zeal and anxiety of its friends, as by the sapping attacks of those either inimical to it as unnecessary, or who regard it as an impossibility. For ourselves, after the examination which has been given to the establishment, we have returned with much more faith in its utility, and a far firmer expectation that the day is not so distant, when the Agricultural College will be really what the people of Michigan are so desirous it should be made.

We publish the report which was submitted to the Board of Education on another page, with the permission of that body, and in reference to it, have only to regret that the time afforded us to make the examination and report was necessarily so very short.

Political Intelligence.

In this State, the election for Chief Justice was held last Monday, as well as the elections for town officers. Full returns have not yet been received, but enough is known to enable us to state that the present Chief Justice, Martin, is re-elected by a large majority. The city of Detroit gave an unusually small vote, and the very unusual result of a Republican majority, but it must be conceded that this seems to have arisen from the fact that the Democrats as a general rule did not go to the polls, for their opponents are short of their usual vote by some 1500.

At Washington, it is reported that Commissioner Bowlin, who was sent to Paraguay, has succeeded in establishing peaceful relations between that government and the United States. The selection of this gentleman by the President seems to have been a most judicious one.

The Union newspaper is reported to have passed from the hands of its former owners into the hands of parties who will more fully represent the views of the President.

There is as yet, very great uncertainty existing as to the relations of the United States with Nicaragua. The treaties negotiated have not been ratified, and with every arrival there comes a host of rumors that seem to have no meaning except to serve as pabulum for the agitation-mongers of the newspapers.

☞ During our visit to Lowell we were shown through the Laboratory of our celebrated countryman, DR. J .C. AYER. Scarcely could we have believed what is seen there without proof beyond disputing.

They consume a barrel of solid Pills, about 50,000 doses and three barrels of Cherry Pectoral, 120,000 doses per diem. To what an inconceivable amount of human suffering does this point! 170,000 doses a day!! Fifty millions of doses per year!!! What acres and thousands of acres of sick beds does this spread before the imagination! And what sympathies and woe. True, not all of this is taken by the very sick, but alas, much of it is.—This Cherry Drop and this sugared Pill are to be the companion of pain and anuguish and sinking sorrow—the inheritance our mother Eve bequeathed to the whole family of man. Here the infant darling has been touched too early by the blight that withers half our race. Its little lungs are affected and only watching and waiting shall tell which way its breath shall turn. This red drop on its table is the talisman on which its life shall hang. There the blossom of the world just bursting into womanhood is stricken also. Affections most assiduous care skills not, she is still fading away. The wan messenger comes nearer and nearer every week. This little medicament shall go there, their last, perhaps their only hope. The strong man has planted in his vitals this same disease. This red drop by his side is helping him wrestle with the inexorable enemy; the wife of his bosom and the cherubs of his heart are waiting sick sorrow and fear lest the rod on which they lean in this world; be broken.

O Doctor! Spare no skill, nor cost, nor toil to give the perishing sick the best that human art can [illegible].—*Galveston, Texas, News.*

The Household.

"She looketh well to the ways of her household, and eateth not the bread of idleness."—PROVERBS.

EDITED BY MRS. L. B. ADAMS.

THE GERMAN'S FATHERLAND.

FROM THE GERMAN OF ARNDT.

BY JAMES L ROBERTSON.

Where is the German's fatherland?
Is't Prussia? Suabia? Is't the strand
Where grows the vine, where flows the Rhine?
Is't where the gull skims Baltic's brine?
No; yet more great, and far more grand
Must be the German's fatherland.

How call they then the German's land?
Bavaria? Brunswick? Hast thou scanned
It where the Zuyder Zee extends?
Where Styrian toil the iron bends?
No, brother, no, thou hast not spanned
The German's genuine fatherland.

Is then the German's fatherland
Westphalia? Pomerania? Stand
Where Zurich's waveless water sleeps;
Where Weser winds, where Danube sweeps:
Hast found it now? Not yet! Demand
Elsewhere the German's fatherland.

Then say where lies the German's land?
How call they that unconquered land?
Is't where Tyrol's green mountains rise?
The Switzer's land I dearly prize,
By freedom's purest breezes fanned;
But no, 'tis not the German's land.

Where, therefore lies the German's land?
Baptize that great, that ancient land,
'Tis surely Austria, proud and bold,
In wealth unmatched, in glory old?
Oh! none shall write her name on sand;
But she is not the German's land.
Say then, where lies the German's land;
Baptize that great, that ancient land!
Is't Alsace or Lorraine—that gem
Wrenched from the imperial diadem,
By wiles which princely treachery planned?
No, these are not the German's land.

Where, therefore, lies the German's land?
Name now, at last, that mighty land!
Where'er resounds the German tongue,
Where German hymns to God are sung,
There, gallant brother, take thy stand,
That is the German's fatherland.
That is his land, the land of lands,
Where vows bind less than clasped hands;
Where valor lights the flashing eye,
Where love and truth in deep hearts lie,
And zeal enkindles freedom's brand—
That is the German's fatherland!

That is the German's fatherland!
Great God! look down and bless that land!
And give her noble children souls
To cherish, while existence rolls,
And love with hearts, and aid with hand
Their universal fatherland!

Why the Boys were Discontented.

"Wife, I dont know what has got into our boys; they seem discontented and dissatisfied with the best I can do for them, and are determined to quit farming and seek their fortunes in the city as fast as they come of age, and can leave home as their own masters. I did hope Richard would have married and settled on the north eighty, that I would give him deed of any day, but he is determined to go next spring, and James will follow in two years more, so, after all our hard working and hopes of having them near to take care of us in our old age, I dont see that we'll be any better off than if we had no children at all."

"I'm sure I cant tell why they should want to leave home, now that we are just beginning to live comfortably, and have got the farm into good working order. Ten years ago when it was all grubs and stones and they had to work night and day to make a living, I would n't have blamed them for wanting to get away. But I must say, father, they have been good, faithful boys, and have worked hard and steady without much of a chance to know anything of the world, for they have n't been to school much, and you are no hand to get books and newspapers for them, so, after all, I cant blame them for wanting to know something more; they are ambitious boys, and it's quite natural."

Mrs. Ellis sighed deeply as she said this. She had an indistinct idea that their home was not what it should have been to induce the boys to love farm life, but old habits were too strongly rooted to be disturbed now; besides, the mischief was done, the boys had made up their minds to go, and, as the mother said, "there was nothing left but to make the best of it."

Two or three months before this, the boys with their two sisters were sitting around the kitchen fire; Ann, with her arms folded on the table and her head resting upon them, seemed to be asleep. Maria rocking herself back and forth in a rocking chair, Richard sat thoughtfully looking into the fire, with a troubled expression on his face, and James was reading by the firelight from a newspaper he had borrowed at a neighbor's. The girls were not very tidily dressed; indeed there was a good deal of the appearance of a slattern about Maria, the eldest. Her shoes were untied, one of them down at the heel, her dress and apron both soiled and torn, and her hair more resembling a brush broom than a young lady's head. Yet she had an intelligent, comely face, and had she been neatly dressed would have been quite a handsome girl. Ann was near enough like Maria to be her sister in all respects. The brothers were hardy, robust, fine-looking farmer boys, but there was a discontented unhappy expression on both their faces.

"It sounds like very fine preaching, to them that dont know any better, but it's all bosh and trash to us poor fellows who have the plowing and the digging to do!" said James, throwing down the paper he had been reading, and speaking with an energy that startled both the girls and aroused his brother from his reverie.

"What is it?" asked Richard with something of interest.

"O, this everlasting preaching of city people to us country boys; telling us to be contented with our lot, calling us the kings of the earth, the most independent fellows in existence, and all that. What do they know about farm work?" said James, giving the paper an energetic kick with his heavy boot.

"I would not care so much about the work, if there was anything else with it," replied Richard. "Now, I was up at Mr. Brewer's last night, and there was the table set out before the fire, and two candles on it, one for the girls to see to work by, and the other for the boys to read by. There was Joe in his slippers, as easy as a king, reading Harper's Magazine, and Charles and Tom the same, looking over a parcel of newspapers. The girls looked as neat as pinks; two of them were sewing and Betty was reading with the boys. I tell you it was a little different looking room from what we see here night after night the year round—darkness and dirt, no papers, no books, no nothing but work all day, mope all the evening and then go off to bed, and get up and do the same over again. I tell you what it is, Maria—"

"I know very well what you want to tell me, and I dont want to hear it," interrupted Maria. "You are always setting the Brewer girls over us, and we do every bit as much hard work as they do—more too, I think, for we dont spend so much time primping up as they do. It is a pity if we cant have a little time to rest, without having to run up stairs and comb, and dress, and fix up the minute our work is done, as though we expected company every night! Betty Brewer is as vain as she can be, and I guess Susan and Mary are not lacking much, from the way they dress."

"Now, Maria," broke in Richard, "I don't want to quarrel with you, and I don't mean to, but I will say for once just what I think about these things. I have tried to talk to you and Ann about them before, but you always shut me up with some cross word that makes me angry. I shall not get angry now, for I have made up my mind what to do, and I shall do it as soon as the time comes. I have not seen much of the world, but from what I have seen, I believe if things had been a little differently managed here, I would have been contented to settle down as a farmer for life. Now I shall not. I remember years ago, when there first began to be so much talk about agricultural papers and book farming, and agents were around to try to get farmers to subscribe, I tried to have father join the club and get something for us boys and girls to read. I knew that neither he nor mother cared for such things, for they were old fashioned people and not used to reading, but we young folks needed something of that sort so that we could keep up with the world. Father put me off then, because, as he said, the girls had no taste for books, and there would be no time for James and me to read, as we would have to work hard through the day and would need rest at night. The next year, and the next, it was the same story about the girls not having a fancy for reading, and then you know I earned money and subscribed for two papers myself. I thought if we once made a beginning, you would take some interest in them for the sake of your brothers, if not for yourself; at least, I thought that Jamie and I might sometimes find a decent room or a quiet corner of an evening, but you know how it was; either there were no candles made, or the work was never done up till nine o'clock, or you and Ann would keep such a talking about other things, that there was no comfort in trying to read; or if you did sit down and keep quiet, it was always in such a trim as you are now; you never look nice and tidy about home like—I mean—"

"Like Betty Brewer, you were going to say," interposed Maria.

"Well, like Betty Brewer, or any young lady who has a good home and ought to make herself worthy of it. There is no comfort or pleasure in sitting beside a slatternly woman, even if she is a sister; and then to have her always so, except when she is going out or expects company—I tell you, girls, I believe it makes many a boy sick of his home, and anxious to get away sooner than he would if there was any pains taken to treat him like a gentleman at home. Are not James and I, who work for you and wait on you, and are always ready at your call, entitled to as much respect as a stranger who cares nothing for you, except to amuse himself and get a good supper at your expense? and yet for him you would sweep up the hearth, dress yourself in your best, put a clean cloth on the table and the pleasantest of smiles on your face, while for us you have no more regard than if we were two pigs. Anything is good enough for "the boys." Maria, you are older than I am, and ought never to have given me occasion to say these things, but it was such treatment that made me give up my papers, and it is this that has led me to the determination I have come to about leaving home. I have worked faithfully for father till he can live easily and comfortably; I would not have left him sooner if I could; but I have thought of late that I would like to know which are the most numerous in the world, such sisters as mine or those of Charlie Brewer's."

Literature in the Atlantic Monthly.

Flash literature is so much the order of the day that Magazine publishers seem to look upon it as one of the essentials of popularity. Scarcely a literary periodical published is free from the taint of its slang expressions and rowdy sentiments. Even the *Atlantic Monthly*, with all its pretensions to puritanic fastidiousness of matter and style, has seen fit to let one wheel of the inevitable Juggernaut pass over its pages, and a blackened, slimy track marks its course through each number from December last up to the present time, with a baleful foreshadowing of an indefinite extension into the future—how far is known perhaps, only to the publishers and to the manager of the bear dance and cattle show.

An author's claims to public favor, or to a high place in the ranks of literature, are usually based upon some merit of matter or style, or borne up by the prestige of a name made famous by former exploits, either literary or otherwise, which often serves as a passport to popularity where real merit is wanting. On which of these bases the writer of "Bulls and Bears" in the *Atlantic Monthly* rests his claim to the position he occupies, it would be difficult to tell, and quite as difficult to understand the reason of his being permitted to retain that position, unless we refer to the too plainly apparent truth expressed in the first sentence of this article. The style of "Bulls and Bears" is flash of the flashiest kind, and the matter is trash of the trashiest kind. The animals themselves are of the beastliest class of those very beastly species, and their characters and deeds such as would disgrace the brutes whose names they bear. Sandford, the leading character among the male performers is a smooth-faced shallow-brained hypocrite, and the heroine, his sister, is a *blase* coquette, unwomanly, depraved at heart, ill-tempered, and vulgar. Yet she is paraded forth as one of "Boston's first;" "*Incedo regina* was the expression of her gracefully poised head and her stately carriage," says the author. She becomes enamored of a poor, spiritless, milk-and-water artist, who is given to kissing a country girl's daguerreotype which he carries in his vest pocket; she follows him to a fashionable watering place "out of the season," manages to get him out to sea alone with her in a boat, the usual clap-trap of a storm is brought on, and, after a deal of drifting and drenching, sobbing, swooning, &c., they are "providentially" landed on a shelving rock, apparently prepared for that express purpose, and here, after a little sickish scene between the half-drowned pair, the dripping woman throws herself into the dripping painter's arms, exclaiming, "Dear George, you have saved my life! It is yours! Take me!"

And he does take her, though only for a brief period, when a littte reaction of feeling brings up the daguerreotype again, he confesses his duplicity, and then such a scene occurs as brings out all the ill-breeding of the woman which has not shown itself before. In unwomanly display of passion and disgusting vulgarity of speech, this scene is second only to the one just before detailed at great length, which took place between the drunken, rowdy brother and the miserable caricature of an officer who is sent to "'tach the furnitur' an' stuff, an' stay for a receipter."

What may be the object or aim in view in publishing such details, the Boston literati doubtless know best. If it is an expose of social life there, it may claim the merit of showing what material the society of modern Athens is made of, but as the looseness of the characters introduced agrees so well with the loose, swaggering style of the writer, we think the fairest inference is that it is to be taken as an exponent of his associations and abilities, and that the *Alantic* serves it up as a sort of compromise between the high tone it assumes and the popularity it courts.

The Bread question will be attended to next week, in the mean time will "A Detroit Housekeeper" please favor us with her name, as the FARMER rule excluding anonymous communications is imperative. The name is not wanted for publication, but for our own security.

☞ Miss Muloch, author of "John Halifax, Gentleman," has recently published a new volume entitled "Annie Learmont."

Household Varieties.

SHE CALLS ME FATHER.

She calls me "father!"—though my ear
That thrilling name shall never hear,
Yet to my heart affection brings
The sound in sweet imaginings;
I feel its gushing music roll
The stream of rapture on my soul;
And when she starts to welcome me me,
And when she totters to my knee,
And when she climbs it to embrace
My bosom for a hiding-place,
And when she nestling there reclines,
And with her arms my neck entwines,
And when her lips of roses seek
To press their sweetness on my cheek,
Or when upon my careful breast
I lull her to her cherub rest,
The heart to which I hold my dove
Swells with unutterable love!

JAMES NACK.

Suggestion for Church Sleepers.—A writer in the *Pacific*, after discussing the various positions in vogue for sleeping in church says:

"The only truly pious way of performing the important duty of sleeping in church, is to sit bolt upright with the face to the minister, eschewing nodding, snoring and depressions of the head.—Now, Christian brethren with long necks object to this mode of worship because of their inability to maintain the head erect when the will is lost in sleep. I admit the force of the objection—indeed have felt the evil myself, and hence it occurs to me that some apparatus for the support of the head, such as the barbers have on the backs of their chairs, might be fixed on the pews. These aids to worship might be moveable, fastening on the pews with a clamp; and when one worshipper is through with his devotions, the machine might be slid along to another. When the service is ended, the sleeping Christian could take his Bible and Psalm book under one arm, this little aid to devotion under the other, and wend his way home, well satisfied that he has performed his duty in a plain, worthy and decent manner."

☞ G. P. R. James, Esq., is writing a serial for the *Saturday Evening Post* entitled, "The Cavalier." In the introductory remarks he thus speaks of the modern style of romance writing in comparison with the past:

"I remember quite well the time when long and minute descriptions of scenery, costume, armor, personal appearance—ay, and even character—were highly palatable to the reader. The exquisite pictures afforded by the poems and romances of Sir Walter Scott were the delight of intelligent minds. Men felt in reading them as if they were gazing at the glorious handiwork of a Claude or Poussin; but we have changed all that; we hear from the lips of every little critic deep condemnations of long and wearisome descriptions; and every sort of stimulant, from blood and thunder to philosophical infidelity, is required to excite the public taste. Fifty thousand throats cut in one chapter, five or six thousand young ladies seduced by one villain, with a reasonable admixture of gambling, swindling, drinking and lying, form the best sauce to any story that can be told, although every now and then a work appears, which, like the great "Novel" of Sir Edward Lytton, commands attention by its intrinsic power, few books can be produced in which cayenne pepper, in some shape, does not overbalance all the other condiments."

☞ Miss Maria Mitchell, the astronomer, is preparing to establish an observatory at a suitable position within the limits of Nantucket, her native town.

☞ Mr. Charles Scribner announces as in preparation a new book entitled "Female Painters and Sculptors," by the author of "The Women of the American Revolution." The work will give a view of the female artists of Greece and Rome, and those belonging to the Middle Ages and centuries succeeding, down to the present day, including American women, as well as those of the countries of Europe.

☞ Dr. Elizabeth Blackwell is delivering a course of lectures in London, on the value of Hygienic and Medical Knowledge to Women.

How to get rid of Sunday Visitors.—The editor of the Louisville *Presbyterian Herald*, in replying to a subscriber who inquires how he should prevent young men from calling to see his daughters on Sunday, says:

"Call your daughters in, and make them recite the Catechism, and politely invite their visitors to come in and see how well they can do it. In a month, you will not be any longer annoyed in that way."

Sahara.

The North British Review in an article on several French works relating to Algiers, thus speaks of one by Eugene Fromentin, entitled "*A Summer in the Sahara.*"

"It is indeed summer that M. Fromentin has seen. Summer such as makes even the hottest summers of the southern climes of Europe look ghastly. He goes to the Desert for the Desert's sake, for the sake of those infinitudes of which we have already spoken; the infinite light, the infinite heat, the infinite silence, and the infinite space. He is attracted even by that which would repel any other traveller; and as he gazes from the heights of El-Aghonat upon the scorched land that lies beyond, such a name as *Bled-el-Atench* (the land of thirst,) instead of alarming, fascinates him. 'I passionately love the blue,' he exclaims, and there are two things I burn to contemplate: the sky without a cloud above; the desert without a shade.

As we are not aware that any so true and perfect copy of the various aspects of the Desert is elsewhere to be found, as in the book now under review, we will translate the picture given by M. Fromentin of a day and night of solitude in the middle of the Sahara.

"The sons of this soil love it to adoration, and I can well understand their passionate sentiment. Travellers—those from the north especially—call it a fearful country, where death lies in wait for the European, in the shape of heat, thirst, or *nostalgia*. Many wonder at me for being here, and most people try to deter me from remaining, under pretence that I shall lose my time, my health, and what is worse, my reason. Assuredly this land, such as it is, so simple and so fine, is, I avow, not charming, but it is more productive of strong emotion than perhaps any country in the world. It is a land without grace, without softness, but whose merit is its severity, and whose first influence is to incline the beholder to gravity (gravity being by the vulgar often mistaken for *ennui*,) short dawns, long noons, heavier than elsewhere, hardly any twilight; sometimes a sudden expansion of light and heat; winds of fire, that all at once cast a threatening air over all things, and produce for the moment fits of languor and depression; but, for the most part, a radiant immobility, the somewhat sad fixity of perpetual fair weather,—upon the whole, in short, a species of universal impassibility, that, from the sky, descends upon the earth, and from the aspects of the earth, seems reflected back upon the faces of the human kind.

"The first impression produced by this vast spectacle, ardent at once and inanimate, made up of space, solitude and sun, is to a certain degree a painful one, and is like urto none other. Little by little, however, the eye familiarizes itself with the grandeur of the outline, the emptiness of the space, the nakedness of the ground; and the only astonishment that subsists is, that any should be felt in the face of such changeless and such simple scenes.

"Till now, the exaggerated and violent aspects, so much talked of in the East, have not struck me; and I find but little to justify the extraordinary descriptions one reads of it. The sky is, with more intensity, the same sky as that of Algiers; it is the sky of a country that is dry as well as hot. Perfectly different (and upon this I purposely dwell) from the sky of Egypt, for instance, which is the sky of a country the soil whereof is watered, steeped, overflowed, and heated at once; of a country that possesses a huge river, and vast lagoons, where the nights are always damp, and the earth is in a perpetual steam. This sky, on the contrary, is for ever clear, arid, and invariable; the white or fawn-colored fore-grounds, or the rose-tinted hills, help to preserve the azure of the firmament unmodified over its entire surface; or, when at sunset the sky grows golden in the east, opposite to the sinking sun, the extremity towards the horizon is violet-tinged, or barley grey. Neither have I seen any mirages. My best and most delightful hours—those I shall regret the most—are those I pass upon the heights of the town, usually at the foot of the so-called Eastern Tower, and fronting the immense horizon that opens before me on all sides, boundlessly. From this point everything is clear: from east to west, from north to south—hills, mountains, town, oasis, and desert, all lie there spread out. I am there at dawn; I am there at mid-day; I return there at evening. I am alone, and perceive no human being, save here and there a rare visitor, who is attracted by the sight of my white parasol, and is lost in surprise at the singular taste that can induce me to be where I am, upon these heights. At the hour when I first reach my favorite spot, a few moments generally after sunrise, I find a native sentinel lying asleep at the foot of the tower.—His guard is soon relieved, for this outpost is only guarded during the night. At the hour I speak of, the whole country around is rose color, bright rose color, with back-grounds of peach blossom; the town is speckled with bits of shade, and here and there a white marabout, on the edge of a palm plantation, looks gay in the still sameness of a land that appears to smile in the sun's face on its first waking. The air is calm, and for a very short space of time almost cool; and there are vague musical sounds afloat upon the wind, that tell one the dawn is a cheerful thing all over the world.

"In a few minutes, and every day at the same hour, there comes rustling from the south the noise of wings, and the hum of birds. These are the *gangas* (a sort of red partridge,) that fly from the Desert to the springs to drink. They sweep rapidly over the town; and the beat of their pinions, and their low quivering cry, have something strange, as for an instant their sun-gilt feathers seem to cast spangles over the face of the blue sky. This is somewhere about half-past six. An hour after, the same rushing noise comes from the north: it is the *gangas* on their return home; but this time, as they fly desertwards, the sound of their flight, instead of suddenly ceasing, as before, when they reach the wells, sinks gradually down, and

merges imperceptibly into silence. The morning is ended, and the only laughing hour of the day is passed between the coming and going of these birds. The landscape, instead of rose, is now tan-colored; the little shadows of the town have vanished; and as the sun rises, the walls of the city grow grey.—By degrees, as the Desert lies more and more under the sun's uniform glare, it looks as though it darkened beneath it; the sand hills alone remain ruddy. If there has been a breath of wind, it now falls; hot exhalations rise up from the plain; two hours later, the trumpets sound the retreat—all sound and movement ceases, and at the clarion's last note, it is noon.

"At this hour I need fear no one; for no one, save myself, would dream of remaining where I stay. The sun rises, rises, and is at last directly over my head. I have no shelter save my parasol. My feet rest upon the burning sand; my drawing papers writhe in the heat, and my color-box crackles like blazing wood. Not a sound is to be heard. The next four hours are full of a calm and a stupor that are absolutely incredible.

"The town sleeps at my feet, a dumb, violet-colored mass, with its empty terraces, and closed windows and doors. A thin streak of darker purple marks here and there the meagre shadow of a high-walled street, and a line of light, sharper at its edges in this place or that, distinguishes one from the other the edifices of the slumbering city. On either side spreads forth the oasis, silent too, and oppressed under the cumbrousness of the heat. It seems a sheet of green, where the form of no tree is visible. On the southern side the walls are, as it were, overflooded by waves of sand—the Desert encroaches on cultivation. The trees move not. In the thickness of the woods, you guess, but do not perceive, certain dark and shady nooks where the birds lie hidden, waiting for their second waking at night-fall.

"This is the hour when—I was struck by it on my first arrival—the Desert is transformed into a vast dark plain. The perpendicular sun shuts it in on all sides into a circle of light, where every ray is of equal intensity. There is then no perspective, no light and shade, nothing relative, no means of calculating distance. A brown hue covers all things; you discern nothing; and the utter immobility of this solid sea astounds you.—When you gaze at it, then, commencing as it does at your feet, and gradually rolling farther and farther on to the east, to the west, to the south, without a path, without a road, inflexible and mysterious, you ask yourself, what is this silent land, clothed in what may well pass for the color of the eternal void? this land whither none cometh, whereto none goeth, where none dwell, and that ends in one line, straight and hard, drawn against the sky? Were one even geographically ignorant, one should feel it did not end there, and that yonder line marks but the entrance to what are the high seas of the ocean of sand.

"To these dreamy thoughts, add the knowledge of the strange places whose names are down on maps, and whence you are separate by only thirty, or fifty, or sixty days' journey, as it may be. The tribes, some familiarly known, others vaguely talked of as of phantastic beings: the *Beni-M'zab*, the *Chamba* the *Touaregs*, with their vast tracts of territory; the land of the negro races, far beyond; a capital, vast as a kingdom; lake, forests, rapid rivers; seasons unlike ours; and the strange products of the equator; monstrous beasts, elephants, gigantic sheep, and what not. Nothing homely, or that we can appreciate; unmeasurable distances, incomputable proportions, uncertainty; mystery everywhere! The great enigma! There, before me, I have now the enigma's first syllable, its beginning, and a more extraordinary sight never met the eye of the noon-day sun; but beyond? Ah! it is here that I would fain see the Egyptian Sphinx!

"Whenever you search for life, you search in vain; nothing moves. Sometimes (but rarely) a few camels and their drivers pass across the sand hills, unseen till they have mounted the slight rising ground. They are travellers. Who are they? Whence come they? They have traversed and none has descried them—the entire line of the horizon lying immediately before my eyes. Sometimes a sand-spout darts up into the air like a column of smoke, and in a few seconds evaporates, and is no more.

"The day is slow to pass away. It fades as it commenced. Roseate hues blush over an amber heaven, back-grounds show deepened tints, long tongues of flame lick the hills empurpling them. The sands, the rocks, all redden beneath the reflection; shade creeps over the spots that were tortured by the heat; and a general relief seems at hand. The sparrows and ringdoves chirp and coo whisperingly among the palm trees. A species of resurrection takes place in the town; human beings are visible on the terraces, the voice of beasts is heard on the open places,—horses, that are led to water, neigh, camels bellow; the desert shines like one immense sheet o' gold; the sun sinks behind the lilac hills, and night prepares to tread upon the scene.

"When I come in after a day thus passed, I have a kind of intoxicated feeling, caused, I believe, by the prodigious quantity of light I have absorbed during this Solar immersion, which has lasted twelve hours. I am in a state I can with difficulty make clear. A sort of intense translucidness dwells as it were within me; nor yields to the approach of evening, but refracts itself again from the interior to the exterior, through the obstacle even of sleep. I dream of light. I am light-pervaded. I close my eyes, and flames are around me—I have, in reality, no night. This ceaseless sensation of daylight, even in the sun's absence; this illuminated slumber, across which shoot globes of fire, as meteors dart through summer's midnights; this singular night-mare, as it may be called by some, which deprives me of the sense of darkness, all these phenomena resemble the symptoms of fever; but I have none. I feel no fatigue even, nor do I complain of the state I describe."

GROVER & BAKER'S
CELEBRATED
FAMILY SEWING MACHINES,
495 Broadway, New York.
143 Jefferson Avenue, Detroit.
58 West Fourth Street, Cincinnati.

A NEW STYLE--PRICE $50.

This machine sews from two spools, as purchased from the store, requiring no rewinding of thread; it Hems, Fells, Gathers and Stitches in a superior style, finishing each seam by its own operation, without recourse to the hand-needle, as is required by other machines. It will do better and cheaper sewing than a seamstress can, even f she works for *one cent an hour*. Send for a Circular.

WHEELER & WILSON'S
IMPROVED
SEWING MACHINES.
PRICES GREATLY REDUCED.
Particular attention is invited to the
NEW STYLE AT $50.00.

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L. D. & H. C. GRIGGS,

GENERAL AGENTS for Michigan and Western New York.
145 Jefferson Avenue, Detroit.

GOOD NEWS.—A reduction in the prices of Sewing Machines is announced in our advertizing columns.—Their utility is established beyond question, and at the present prices we see no reason why they should not be found, as they ought to be, in every household. Several varieties are manufactnred, adapted to various purposes. So far as public opinion has been formed and uttered, the preference is emphatically accorded to the Wheeler and Wilson machine for family use, and for manufactures in the same range of purpose and materil. During the present autumn the trials have been numerous, and all the patents of any pretension have brought fairly into competition. In every case, the Wheeler & Wilson machine has won the highest premium. We may instance the State Fair of New York, New Jersey, Pennsylvania, Kentucky, Illinois, Wisconsin, Virginia, Michigan, Indiana, Mississippi, Missouri and California, and the Fairs in Cincinnati, Chicago, St. Louis, Baltimore, Richmond, and San Fransisco. At the Fair of the St. Louis Mechanical &sociation, the Examining Committee was composed of twenty-five Ladies of the highest social standing, who, without a dissenting voice, awarded for the Wheeler & Wilson Machine, the highest only premium, a Silver Pitcher, valued at $75. If these facts do not establish a reputation, we know not what can.—*Christian Advocate and Journal.*

WEEPING TREES FOR LAWNS, Cemeteries, &c. Some very fine extra sized Weeipng Trees, 10 to 15 feet high such as, English Weeping Ash, Weeping Mountain Ash, a very beautiful and extremely pendulous tree; Scampston Weeping Elm, a splendid variety with extremely large foliage, by far the finest Weeping Elm grown; Weeping Scotch and English Elms, Oaks, Limes, Popular Willows, &c.
Prices from $1 to $2 each the latter very large and fine trees; $9 to $18 a dozen. JAMES DOUGALL.
Windsor Nurseries, Windsor, C. W.
April 1st, 1859. 15 2w

DWARF PEARS On the Angers Quince, a very fine stock from one to four years old, the latter covered with bloosom buds. Comprising 300 varieties including all that is fine and rare.
Prices from $2 to $6 a dozen or $20 to $35 per 100, according to size and age.
Dwarf Apples On the Doucin Stock for Gardens at from $3 to $4 a dozen, the latter bearing trees.
JAMES DOUGALL.
15-2w Windsor Nurseries, C. W.

NEW AND FINE GRAPES.

NATIVE GRAPES, Anna, Concord, Delaware, Diana, To Kalen and Rebecca, price from 50 cents $5 each, according to variety and size.
Foreign Grapes, Callinbae, Chasselas de Florence, Chasselas Blanc Royale, Imperial, Froc Laboulac, St. Louis, &c., these are very early and quite new, the fruit of some having been exhibited in England for the first time last year, while the others have not been yet fruited there. Price $1 each, together with nearly all the fine older varietiet at 50 cents each or $4.50 a dozen.
JAMES DOUGALL.
Windsor Nurseries, C. W., April 1st, 1859. 15-2w

STRAWBERRIES, Nearly all the standard varieties can be supplied at 50 cents a 100 or $4 per 1000—they will be sold at these exceedingly low rates as the land where they are is required for building purposes this spring. JAMES DOUGALL.
Windsor Nurseries, C. W., April 1st, 1859.

EXTRA SIZED FRUIT TREES, Dwarf and Standard, a few very fine large bearing trees Cherry, Pear, Apple, Plum, &c., that have been transplanted and can be removed with safety.
Ornamental Trees and Shrubs, A few very fine rare varieties of very extra size similar to above.
The ground where these trees are must be cleared for building purposes this spring, they will, therefore, be sold low. JAMES DOUGALL.
Windsor Nurseries, C. W., April 1st, 1859.

WINDSOR NURSERIES, C. W.

FOR SALE a large and well grown stock of nearly everything in the NURSERY LINE, such as
Fruit Trees—Both Standard and Dwarf, of all sorts—except Peaches—Quinces, Grape Vines, Native and Foreign, of all the new and rare sorts, Currants, Gooseberries, Mulberries, Walnuts, Blackberries, Raspberries, Strawberries, Rhubarb, &c.
Ornamental Trees and Shrubs, Deciduous and Evergreen, splendid extra sized Weeping Trees for Lawns, Roses, Tree and Herbaceous Pæonies. Tulips, Hyacinths and other bulbous flower roots in their season an unrivalled collection.
The whole of the stock has been propagated and grown in the WINDSOR NURSERIES and is warranted thrifty and true to name.
Orders will be promptly attended to, carefully packed and delivered free as directed in Detroit, after which they will be at purchasers risk.
Catalogues sent on application addressed to
JAMES DOUGALL, Box 131 Detroit P. O.
Windsor, C. W., April 1st, 1859. 14-8w

1859. SUMMER ARRANGEMENT. 1859.

MICHIGAN SOUTHERN
AND
DETROIT, MONROE and TOLEDO
RAIL ROAD.

ON and after Monday, April 4th, 1859, Passenger Trains will run as follows:
Leave Detroit for Adrian and Chicago at 7.00 A.M, and 5.30 P.M.
Arriving at Adrian at 9.57 A.M and 10.20 P.M.
" " Chicago at 7.00 P.M and 7.00 A.M.
For Monroe, Toledo, Cleveland, Cincinnati, Buffalo and New York: Leaves Detroit at 7.00 A.M and 1.00 P.M.
Arrives at Monroe at 8.45 A.M. and 3.20 P.M.
" " Toledo at 9.35 A.M. and 4.30 P.M.
Leaves Toledo at 10.10 A.M. and 5.30 P.M.
Arrives at Cleveland at 3.00 A.M. and 9.55 P.M.
From Chicago for Detroit:
Leaves Chicago at 6.00 A.M, 8.00 A.M. and 8.00 P.M.
From Cleveland for Detroit:
Leaves Cleveland at 4.00 A.M., 11.25 A.M, and 5.20 P.M.
" Toledo at 8.50 A.M., 4.10 P.M.
Trains arrive at Detroit from Chicago, Adrian, Cleveland and Toledo at 11.20 A.M., 12.40 P.M. and 7.15 P.M.

CONNECTIONS:

The 7.00 A.M., Train from Detroit makes direct connection at Adrian, with Express Train for Chicago and Jackson. Arriving in Chicago at 7.00 A.M., in time to connect with the Trains of all Roads running west of Chicago; and at Toledo with Express Train for Cleveland—arriving in Cleveland at 2.45 P.M., making direct connection with Express Train for Buffalo and New York; arriving in New York at 1.20 P.M., and with the Express Train for Pittsburg.
The 1.00 P.M. Train connects at Toledo with Express Train for Cleveland, Buffalo, and New York—arriving in Cleveland at 9.30 P.M. and New York at 9.30 P.M.,—next evening, and with Express Train for Pittsburgh.
The 5.30 P.M. Train, connects at Adrian with Express Train for Chicago—arriving in Chicago at 7.00 A.M.
The 4.00 A.M. Train from Cleveland, and 8.50 A.M. Train from Toledo, arrives in Detroit at 12.40 P.M.—Making Direct connection at Detroit with Express Train on Great Western Railway for Suspension Bridge and Niagara Falls.
The 11.25 A.M. Train from Cleveland; the 6 A.M. Train from Chicago via. Adrian, the 8 A.M. Train over Air Line via. Toledo and 4.10 P.M. Train from Toledo, makes direct connection at Detroit with Express Train on Great Western Railway for Suspension Bridge and Niagara Falls, leaving Detroit at 7.45 P. M.
Direct connections are also made, at Detroit with the Detroit and Milwaukee Railway.
☞ Sleeping Cars accompany the Night Trains between Adrian and Chicago.
☞ No change of Cars between Detroit, Adrian and Chicago.

JNO. D. CAMPBELL,
SUPERINTENDENT.
S. P. KNIGHT, Agent, Detroit. 7-tf

FARMERS OF MICHIGAN!

Who want to purchase
AGRICULTURAL TOOLS
AND
IMPLEMENTS!
As you would secure your own interests, get the articles manufactured by
WATERS, LATHROP & McNAUGHTON,
In the City of Jackson.

Waters, Lathrop & McNaughton
Make the
MOST DESIRABLE KINDS
of Farming Utensils, and the
BEST OF THE KIND.
Among their manufactured articles are found the best
Cultivators, Harrows,
and
POTATO DIGGERS
Of different patterns, also,
PLOWS AND ROAD SCRAPERS,
STORE TRUCKS
For Stores and Granaries. Every Storekeeper and every large Farmer wants one.
The Best Harvesters
In the country, and
THRESHIMG MACHINES.
With Separators or without them. Their Harvesters are
Allen's Combined Mower and Reaper.
AND
Allen's Mowing Machine.
(R. L. Allen s patent, New York, with his very latest improvements.) The
Buckeye Mower and Reaper.
AND
Aultman & Miller's Mowing Machine.
(C. Aultman, of Canton, Ohio)
These are undoubtedly the best two Harvesters and Mowing Machines for either rough or smooth ground, wet marsh or dry meadow, and for standing or fallen grain. The farmer who uses either of these need desire nothing more in that line. Also a superior
REVOLVING HORSE RAKE,
With sixteen teeth, being the greatest labor saver known on any farm. The very best
Grain Cradles, Scythes, Scythe Snaths, Horse Rakes, Gigg Rakes, Hand Rakes, &c.,
Including
THE CELEBRATED MORGAN CRADLE & SCYTHE
THE CELEBRATED MULLEY SCYTHE SNATH,
THE "EXCELSIOR" SCYTHE SNATH,
BUSH SNATHS, WITH TWO HEEL RINGS,
AN IMPROVED HORSE POWER,
For one or two horses, and a perfect charm of a
DOG POWER.
For Churning, Washing, &c.
Water's Superior Grass Scythe.
This Scythe, of rolled and polished Steel, is beyond a doubt the NE PLUS ULTRA in the line of a Grass Scythe. No mower who has ever used one, would give it for one of any other kind.
GOOD and CHEAP STRAW CUTTERS.
All the desirable varieties of SHOVELS, SPADES, SCOOPS, HOES, TOOLS, RAKES, POTATO HOOKS, and FARMING and GARDEN TOOLS generally, and all sorts of TOOL HANDLES.
WATERS, LATHOP & MCNAUGHTON.
15-13w Jackson, Mich.

SEEDS! SEEDS! SEEDS!

THE Subscribers have on hand and for sale at wholesale and retail, a large and complete assortment of Garden, Flower and Field Seeds, obtained from the most reliable sources, both in this country and Europe. Of the growth of 1858, good and true to their marks.—Farmers, gardeners and others in want of Seeds of almost any kind, can obtain from us those that will give entire satisfaction.
Catalogues may be had on application at our store, 166 Woodward Avenue, or by mail.
M. T. GARDNER & CO., Seedsmen.
Detroit, Feb. 24, 1859. 9-8w

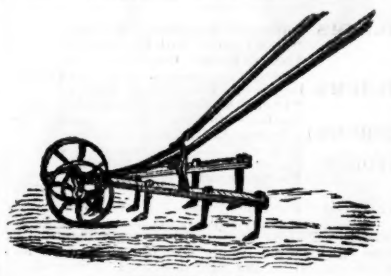
LAWTON BLACKBERRIES FOR SALE At the rate of $2.00 per dozen, or $10.00 per hundred by HUBBARD & DAVIS,
7-3m Fort Street, Detroit

SEED OATS & POTATOES. Black Oats for Seed and Carter, Early Jane and Mexican Potatoes. For sale at the American Seed Store.
J. BLOSS & CO.,
13-4w No. 32 Monroe Avenue, Detroit.

RAREY'S SECRET OF HORSE TAMING With a fine Portrait, Price 25 cents and sent free of postage, send orders to O. A. ROORBACH, Jr.
15-13w 346 and 348 Broadway, New York.

THE IMPLEMENT FOR GARDENS.

THE HAND SCARIFIER.

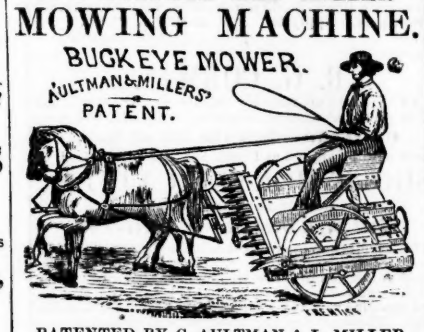


PRICE $3.50.

WE offer for sale the Hand Scarifier, the most desirable and useful implement for gardens, of any that has been invented, and the most perfect labor saver.
Read the testimony of those who have tried it last season:—
ROCHESTER, OAKLAND, Co., MICH., FEBY., 1859.
MESSRS. BLOSS & ADAMS:
You cannot recommend too highly your Hand Scarifier. It is an invaluable machine for cultivating all root crops sown in drills. It works easy, a boy of 12 years old can use it and do more work than five men can with hoes in the same time. It pulverises the surface of the ground and kills all the weeds. I had one the last season and speak from experience. A person having a quarter of an acre of garden to cultivate should not be without one and no farmer or gardener after using one a single hour would be without one for four times its cost.
W. JENNINGS.

ROCHESTER, OAKLAND, Co., MICH., FEBY, 1859.
MESSRS. BLOSS & ADAMS:
In answer to your inqury, "How we like the Hand Scarifier," we reply that we are highly pleased with it.—It is the greatest labor saving machine for its cost that we have ever used, or seen. For all root crops sown in drills it is invaluable. One man with this machine can do more work in one day than five can with hoes, and do it better. We have used it two seasons and would rather pay twenty dollars for one than do without it.
Yours respectfully, U. ADAMS.
JULIEN ADAMS.
These implements are for sale, by the subscribers at their their seed store, J. B. BLOSS & CO.
No. 22 Monroe Avenue, Detroit.

THE GREAT PREMIUM MOWER.
THE AULTMAN AND MILLER
MOWING MACHINE.



PATENTED BY C. AULTMAN & L. MILLER.
To which was awarded the First Premium, a Gold Medal and Diploma, at the Great National Trial at Syracuse, N. Y., July, 1857.

MANUFACTURED BY
C. AULTMAN & Co.,
Canton, Stark County, Ohio.

After toiling and experimenting for many years, we have finally succeeded in getting up a machine that is perfectly adapted to cut both Grain and Grass. The public are already aware that we have been manufacturing a Mowing Machine that has been unrivalled in any market.
But the Farmer wants a machine that will cut both grain and grass, provided he can get a combined machine that will mow as well as a machine made expressly for mowing; and reap as well as a machine made expressly for reaping. This we furnish in our *New Machine.*
First,—We have a perfect Mower, having several advantages over all other Mowers, and no disadvantages, which will be readily seen by examining some of its points of excellence.
Second,—We have a perfect Reaper, which has all the advantages of a single machine, and the only true way of delivering the grain at the side of the machine.
We have a cutter bar and platform for cutting grain, independent of the Mower, so that in changing the Mower into a Reaper, we just uncouple the cutter bar at the hinge and couple the Reaper platform which renders the machine complete for cutting Grain.
In having two cutter bars, one for grass and the other for grain, each is perfectly adapted for doing the work it is designed to do, thus avoiding the great difficulty heretofore existing in combined machines, in having the cutter bar either too long for grass or too short for grain.
This machine has been thoroughly tried, both in grass and grain, having had a number in use the past harvest.
The following are some of its points of excellence as a Mower:—
1st. It has not one pound of side draft.
2d. It has no more weight on the tongue, or horses' neck, than a wagon.
3d. Its draft is only 275 pounds—so reported by the Committee at the Ohio State Trial, 1857.
4th. It runs on two wheels which serve as drivers.
5th. It has an adjustable cutter bar and accomodates itself to an uneven surface of the ground.
6th. The cutter bar is in front of the driving wheels and the seat in the rear. Thus enabling the driver to see the operation of the cutters, without interfering with his driving. Also, avoiding all danger of falling into the knives.
7th. The driving wheels have no cogs on them, but drive the gearing by means of palls and ratchets.
8th. By means of these palls and ratchets, the knives cease to vibrate in backing the machine.
9th. The driver, while in his seat, can see every bolt, box, and all the gearing when the machine is in motion.
10th. The gearing is all permanently arranged in the centre of the frame, distant from the driving wheels, thus avoiding all tendency of its being clogged up with mud or dirt thrown up by the drivers.
11th. The cutter bar being attached to the machine by means of hinges, can be folded up on top of the machine without removing the connecting rod, knife or track cleaner.
12th. The palls on the driving wheels can readily be thrown out of gear, and by folding the cutter bar as above stated, renders the machine as portable as a common cart.
13th. There is a wheel on the shoe next the gearing in front of the cutter bar, thus avoiding all tendency of clogging at the near shoe, in passing over cut grass.
14th. The off shoe is only 2½ inches wide, and the last knife cuts no more than any other, therefore leaving no ridge or high stubble at the end of each swath.
15th. The cutter bar can be raised or lowered by means of an adjustable steel spring shoe at off end, and a slot in the near shoe where the wheel is attached.
16th. There are no nuts or screws at the connecting rod, which are always liable to cause more or less trouble by jerking loose, but use a gib with a spring pall and a ratchet key, thereby avoiding all possible chance of shaking loose.
Points of excellence as a Reaper:—
1st. It has all the advantages that the Mower has in the gearing, connecting rod, and draft for the horses.
2d. The grain is delivered at the side, so that a whole field can be cut without taking any of it up.
3d. The driver's seat is the same as on the Mower, affording him a free view of the operations of the machine.
4th. The raker stands at the rear of the platform, which is the best position for delivering the grain.
5th. The raker with one motion, throws the grain to the side, then delivers it in the rear; thus avoiding the difficulty of dragging the grain from one gavel to another.
6th. The platform can readily be raised or lowered to suit all kinds of grain or ground, by means of two screws, at near side, and slot at off side, when off platform.
N. STEELE is the travelling agent, and is now soliciting orders in this State.
All letters of inquiry, or requesting further information may be addressed to E. ARNOLD,
Dexter, General Agent, or
BLOSS & CO., Special Agents, Detroit.

TOBACCO SEED. A small quantity of the Connecticut Seed Leaf variety for sale, 40 cts per oz., including postage. G. YOUNG & PINNEY.
13-4w Plymouth, Mich.

50,000 *PAPERS*
OF
FLOWER SEEDS.
A very large assortment of Flower Seeds, annual and perennial, of the choicest varieties, put up in papers, with printed descriptions, for sale at five cents each, or at fifty cents per dozen papers. Catalogues furnished free. Orders, accompanied with the cash, for one dozen, or more papers selected by the purchaser will be forwarded by mail, postage prepaid, by
M. T. GARDNER & CO., Seedsmen,
166 Woodward Avenue, Detroit.
February 24, 1859. 9-8w

PEACH TREES. A few thousand good two year old trees for sale by G. YOUNG & PINNEY.
13-4w Plymouth, Mich.

SEEDS! SEEDS!!

OUR Descriptive Priced Catalogue of Vegetable and Agricultural Seeds for 1859 is now ready for mailing to applicants enclosing a one cent stamp.
J. M. THORBURN & CO.,
Seed Warehouse, 15 John-st. New York.
N. B. A Catalogue of Tree and Snrub Seeds will be published shortly and mailed as above, containing directions for managing evergreen seeds, &c. 6-8w

PUBLIC SALE
OF
SHORT HORNS.

I WILL offer at Auction, at Circleville, Ohio, on Wednesday next June 15th, about 60 head of Short Horns, about half of which are Herd Book cattle, the remainder high grade, or full blood of imported stock.
A credit of 12 months given for approved Notes at interest. 13-4w HARNESS RENICK.

JUST RECEIVED FROM GERMANY, Pure seed of the WINNINGSTADT CABBAGE and the SILVER SKINNED ONION, the finest variety for pickles known, at J. BLOSS & CO'S Seedstore.
13-4w 22 Monroe Avenue, Detroit.

TREES AND PLANTS.

Wm. ADAIR offers for sale a general assortment of Fruit and Ornamental trees, Flowering Shrubs, Roses, Green House Plants, Blackberries, Raspberries, Strawberries, Grapevines, including the Concord, Diana, Rebecca, Delaware and all of the most popular Foreign varieties for cultivatio under glass. Wilson's Albany, Peabody's Seedling, Jenny Lind, Sir Harry, Hooker, Scott's Seedling, Trollops' Victoria and several other new varieties of Strawberries.
Verbenas, a first rate assortment comprising the novelties of last season.
Dahlias, a splendid collection, which as usual obtained the first prize for the best collection and the best twelve specimens at the last State Fair.
Norway Spruce, Balsam Fir, Scotch and Austrian Pine and other Evergreens can be furnished in quantity, and in short, nearly everything kept in a nursery, at as low rates as they can be procured in the State.
HUBBBARD SQUASH,
50 seeds will be sent by mail for 15 cents in stamps.
Address WM. ADAIR,
12-8w Detroit.

NALL, DUNCKLEE & CO.
Would invite the attention of the Farmers of Michigan, when visiting Detroit, to their extra
SPRING STOCK
OF
CARPETS,
FOREIGN AND DOMESTIC
DRY GOODS,
Fancy Silks, Black Silks.
Organdy Robes, Pohlen Robes,
Bayadere Foulards, Bareges,
Printed Robes, French Prints,
Laces, Embroideries,
White Goods, Kid Gloves.
Hosiery, Sheetings, Cloths,
Flannels, Ticks, Printed Lawns,
Cambrics, Gingham,
Muslin de Laines
Stella Shawls, Broche Shawls.
OUR CARPET AND FURNISHING STOCK
Is complete in all its branches.
Tapestry Velvet Carpet,
Tapestry Brussels do,
Imperial Three Ply,
Extra Super Ingrain,
Superfine do, Fine Ingrain do,
Cotton and Wool do.
Silk Damask, Worsted do,
Morreens, Druggets, Green Baizes,
Cocoa Matting, Plain and Check Matting,
Gilt Shade, Common, do,
Shade Tassels, Cornices,
Rugs and Mats.
Window Hollands,
Window Shades,
Oil Cloths, 3, 6, 12, 18 and 24 foot,
Live Geese Feathers, Paper Hangings,
Which we offer cheap for cash.
NALL, DUNCKLEE & CO.
14-1y No. 74 Woodward Avenue, Detroit.

3,000 VERBENAS!!!

THE following varieties, and many others not enumerated, can be supplied during the season, forming an unrivalled collection:—
**Charles Dickens,* (Edmond's) Rosy lilac, dark centre large eye.
**La Gondalier,* Soft rosy crimson, fine truss and form.
Lady Palmerston, (Edmond's) Delicate pale blue, large white centre, large truss.
**King of Sardinia,* (Edmond's), Deep crimson, dark centre, very large truss and flowers.
**Black Prince,* Very dark purple, large and fine.
Mrs. Woodruff, Splendid scarlet, rivaling defiance.
Mrs. Holford, Large waxy, white truss, extra.
**Imperatrice Elizabeth,* (Pulchella Monetta), a distinct species, with elegant lacinated foliage; color, violet rose, with pure white flakes down each side of the petals.
**Brilliant de Vaise,* Shaded crimson, large and fine.
**Madam Kien,* Soft pink, slightly striped.
Mrs. H. Williams, Very fine white.
**Chieftain,* Dark purple, large truss, fine.
**Madame Viard,* Light and dark pink, striped.
**Incomparable,* Light and dark purple, striped.
**Striped Eclipse,* Striped pink, very fine.
**Queen of Purples,* Fine dark purple.
**Reine de Jour,* White, large truss, excellent.
**Kirts Defiance,* Color light, pink centre, extra large bloom and truss.
**Anacreon,* Very fine scarlet, distinct variety.
**Robinson's Defiance,* Brilliant scarlet.
The above twenty varieties form a very choice selection, price 12½ cents, for strong plants in Pots. For an assortment, $1.25 per doz.; or upon the receipt of $2, four more varieties will be added, our selection, making twenty-four varieties equal to any in cultivation.
They will be packed in moss, each plant distinctly labeled, (without the pots) and delivered, at the Express Office or R. R. Depots in Detroit, at the same price, or sent by mail free of postage for $1.50 per doz.
Those marked thus * supplied at $8, per hundred.
All orders should contain a remittance.
Also the following varieties, will be added to the above list after April 15th, at 15 cts, each plant: Celestial, Attraction, Madam Abt, Giant of Battles, Madam Plantamoor, Prince of Wales, Dred, Tranby, Wonderful, Victory, Rosy Gem, La Stella, Sarah.
The best old varieties supplied at 10 cts each, $1, per doz.; $6 per hundred.
A choice collection of Dahlias, among them first the prize Dahlia at the State Fair in October last, in Detroit, which will be ready to send out in April and May, price 25 cts, each; $2 per doz.; $12.50 per hundred. Wilson's Albany Seedling and Hooker's Seedling Strawberry. Concord, Delaware, Diana, Logan, and Rebecca Grape vines.
FRUIT, AND ORNAMENTAL DECIDUOUS TREES.
10,000 *Norway Spruce* and a large assortment of all the hardy varieties of Evergreens, 50 choice varieties of hardy ever blooming Roses.
Greenhouse Plants.—Bulbous roots, bedding plants, celery, Tomato, and cabbage plants in the proper season. For sale at reduced prices, all orders promptly executed, and articles packed to bear transportation any distance.
Address, HUBBARD & DAVIS,
Box 266, P. O., Detroit, Mich.

MICHIGAN FARMER.

R. F. JOHNSTONE, EDITOR.

ublication Office, 130 Jefferson Avenue.

DETROIT, MICHIGAN.

THE MARKETS.

Flour and Meal.

Article.	*Detroit.*	*New York.*
Flour, superfine ₱ bbl, ..	5.50 @6.00	5.45 @5.75
Extra,.....	6.25 @6.75	6 50 @6.75
Double Extra,.....	6.50 @7.00	6.60 @7.25
City Family, ...	7.00	
Corn meal, per 100 ℔s,...	@2.00	1.75
Buckwheat, ...	2 00 @2.25	
Rye flour, per bbl,.....		3.75 @4.25
Mill feed, Bran, per ton,	16.00	
Coarse Middlings, "	20.00	
Fine Middlings, "	27.00	

Grain.

Article.	*Detroit.*	*New York.*
Wheat, White, ...	1.35 @1.45	1.55 @1.65
Red Winter,.....	1.30 @1.35	1.40 @1.46
Corn mixed western, ...	0.75 @0.78	0.84 @0.86
Oats,.....	0.50 @0.55	0.60 @0.63
Barley, ₱100℔s,.....	1.60 @1.80	1.60 @1.90
Rye, ...		0.82 @0.86

There is little to be said on the subject of breadstuffs. Advices from the foreign markets show no change in the demand there, and the eastern markets remain without movement, there being a good supply fully equal to the consumption. In this market the range is steady at our quotations, with a decline in oats.

Live Stock, &c.

Article.	*Detroit.*	*New York.*
Cattle on foot, 1st quality,	0.5⅗@ 0.6¼	0.6 @ 0.7
do medium,	0.3⅗@ 0.3¾	0.4¼@ 0.5¼
Beef in carcase,.....	0.3⅗@ 0.4¼	0.5 @ 0.7
Sheep, ...	3.00 @5.00	3.75 @5.50
Mutton in Carcase, ...	0.4 @ 0.4½	0.5 @ 0.7
Hogs over 250 ℔s, ...	7.25 @7.50	7.50 @7.75
do under 250 ℔s, ...	6.50 @7.00	7.00 @7.25
Live hogs,.....	0.3⅞@ 0.4½	5.84 @7.00
Pelts, ...	1.50 @2.00	
Hides,.....	0.7 @	

The market for beef is pretty well supplied. We note that Smith purchased during the week six head of cattle from A. Durham, of Redford, and also five from Charles Gray. These latter were raised somewhere in the neighborhood of Lansing. We note also the purchase of 20 head of hogs at 7 cents, and ten sheep at $5 per head; the sheep were estimated to dress 70 pounds of mutton each. Calves that are fed are scarce, and few sell at less than $5.00. The high price of butter is not favorable to the growth of veal.

The telegraph quotations of the New York cattle market are:

The demand for beeves has again been active and the high rates of last week were fully sustained. Receipts 3,000; quotations 9@10 for common; 11½@12 for prime; 12½@13 for premium cattle. Sheep and lambs, trade lively at last week's prices. Receipts 3,500. Swine dull at last week's prices; receipts 6,000.

Wool.

Quality.	*Detroit.*	*N. York.*	*Boston.*
Saxon and Silesian,....		53 @56	53 @57
Merino, full blood, ...	40 @47	45 @47	45 @47
¾ & ½ blood,.....	40 @42	40 @45	38 @45
¼ and grade,.....	35 @37	35 @40	35 @40
Native and coarse wool		30 @35	30 @35

The wool market is looking more downward than it did last week; about 2,500 pounds were bought the present week, but the orders from the east are imperative to shut down on the high rates that have been paid here, and at the present time we doubt if much over 46@47c could be got for the same qualities that 48¾ had been heretofore paid for. There is unquestionably a decline of full two cents in the eastern market during the week, and we learn that some lots sent from here that have been held up, have been put in market with orders to sell at a concession of from two to three cents.

The markets at the east continue very quiet, and we note that the reported sales are light, and exhibit but little change in prices. The Messrs Tellkampf & Co have issued the following circular:

New York, April 1st 1859.

The market through the month of March has been quiet for all kinds of domestic fleece and pulled wools, but prices remain unchanged; if any, it is in favor of the buyer. The stock of fleece is gradually diminishing, whilst pulled has been accumulating, and it is difficult realizing the prices obtained some weeks ago. Desirable kinds of Texan and California wools continue in good demand at about the same rates; but it is thought prices will recede somewhat after the new clip is in. It has been reported that contracts have been made for wool on the "sheeps back at high prices. The farmers will, without doubt, embrace so good an opportunity of disposing of their wool.

Fine foreign wools, in the grease, have been in moderate demand, and brought full prices, and the stock is better. We hope soon to receive full supplies of the medium qualities. We are much pleased to see the improved condition of the new clip of Buenos Ayres wools, which are just coming in, being more free of burrs and dirt than in former years. Low foreign wool, for carpets, &c., continue very firm, and some of the more desirable kinds have been sold at an advance, although there have been fewer sales made than during the month of February. The stock is only moderate.

The accounts from Europe present no new feature. The auction sales at London were progressing at last November and December prices for Australian and Cape wools, and were mostly bid off to the home trade, there being very little foreign competition. Good common wools have advanced slightly, and only the ill conditioned and poorer kinds remain unchanged.

J. L. Bowes & Bro. of Liverpool, issued a circular of March 18, from which we make the following extracts:

During the last two months the unsettled state of Continental politics has checked the buoyant tone which previously prevailed in the wool market, and although consumption continues, in most branches, in a healthy state, there has been on the part of buyers an indisposition to operate; and, notwithstanding the lightness of stocks, the tendency of prices has been downwards.

The greatest decline is in domestic combing kinds, which are now fully 1¢ per cent. lower than in January, but in many imported kinds where the supplies have been limited, the depreciation does not exceed 5 per cent. For the last ten days there has been more business, and confidence appears to be the chief element wanting to encourage an active trade.

The London public sales of 18,928 bales Australian, and 1 ,000 bales Cape, terminated 15th inst., with firmness, at rates generally equal to the Nov.-Dec., series, excepting the ill-conditioned parcels, which are now a ½d to a 1d. lower.

The next public sales of East India, Buenos Ayres, Egyptian, &c., and possibly a small quantity of Australian, will be held in Liverpool the latter part of April, and very large sales of Australian and Cape, including a good selection of unwashed, will commence in London early in May.

Butter maintains its high prices, and good roll retails at 22@25 cents per pound.

Eggs are steady at 9@10 cents per dozen.

Potatoes are selling at various rates from 45 to 56 cents, according to quality, The highest price is only given for a very extra quality.

Beans have declined, and are now worth but 80@90 cents, a lot of 123 bushels being sold at the lower rate a few days since.

SEEDS.—There is nothing doing in seeds worths of note. Prices remain steady, with but light sales.

KETCHUM'S COMBINED HARVESTER.

KETCHUM'S Improved Combined Machine, "Iron Frame," with Reel and adjustable Roller. Cut 4 feet 10 inches $130 00

KETCHUM'S Improved Two Horse Mower, "Iron Frame" with the adjustable Roller to Cutter Bar $110 00

KETCHUM'S Improved One Horse Mower, Iron Frame ..... $ 75 00

SANFORD'S Portable Farm Mill for Grinding Feed for Stock, Plaster or Bones for Manure ..... $ 30 00

SANFORD'S Portable Plantation, or Hand Hominy Mill ..... $ 20 00

Machines and Mills shipped without extra charge.

These Machines are simple in construction, have no equal for durability, and light draft; are entirely free from all side draft, and have no weight upon the horse's neck.

This Machine, as improved for 1859, was awarded the first premium by the Michigan State Agricultural Society, at its annual Fair in September last as a Reaper and as a Mower.

The New York State Agricultural Society at its late Fair awarded it the first premium as a Combined Grain and Grass Harvester.

Ohio, also, awarded it its best commendation.

To those who desire a low price Machine, I would call especial attention to the following:

Wood Frame Mowers, with Iron Bars and adjustable Roller ..... $ 80 00

Wood Frame Combined Machine, with Iron Cutter Bars, Rear delivery, and without Reel ... $100 00

These Machines are well made, of good seasoned timber, warranted free from clogging, and cut from 10 to 15 acres per day—of Grass or Grain. All orders will receive prompt attention. R. L. HOWARD,

Manufacturer and Proprietor, Buffalo, N. Y.

I have for sale pure Hungarian Grass Seed. Price, three dollars per bushel.

Emery's One and Two Horse Railroad Powers, for sale at manufacturer's prices, adding transportation from Albany. 15-4t R. L. HOWARD.

PELLHAM SEEDLING POTATOES
For Sale.

THEY are large, white, mealy, prolific and from three to four weeks earlier than any potato known.

NANKIN SHEEP.

The subscriber has also a few fine bucks of the NANKIN BREED for sale. The cross between them and any other sheep, owing to their potency, produces from two to three lambs, and makes delicious mutton. Between themselves from four to six are produced at a birth three times in fifteen months, they are sheared twice a year. Apply to ROB'T L. PELL.
14-3w New York City.

R. G. CORWIN,

HAVING sold his farm by private contract, it will not be sold at auction as heretofore advertised, but

On Wednesday, the 4th of May,

There will be offered at Public Sale, his entire Herd of

SHORT HORNED CATTLE,

Consisting of forty head of

Bulls, Cows, and Heifers.

This herd is one of great celebrity, and contains within it some of the best animals in America. The cattle are in rather low condition on account of the scarcity of food and the unfavorable weather; but it is believed that no herd contains so many animals of pure and fashionable blood. There are amongst them several imported cattle, and many others that have taken first prizes at our fairs.

The Cattle will be sold on a credit of twelve months, the purchaser giving a note payable in bank, with approved security.

N. B. Information as to the land, and Catalogues of the cattle, furnished by addressing me, at Lebanon, Ohio.
13-6w R. G. CORWIN.

AGRICULTURAL BLACKSMITHING.
HUNTER & MOIR,

AGRICULTURAL IMPLEMENT MAKERS, NORTHVILLE, Wayne Co., Mich., are prepared to make to order the latest and most approved style of SCOTCH IRON PLOWS, IRON and WOODEN HARROWS, SCOTCH GRUBBERS or CULTIVATORS with three wheels, also single cultivators—all of wrought iron. All communications promptly responded to, and all orders filled with despatch.

HUNTER & MOIR,
13-13w Northville, Wayne Co., Mich.

J. L. HURD & CO.
DETROIT MICH.

Produce and Shipping Merchants.

Agents and Consignees for the follow Lines:

AMERICAN TRANSPORTATION COMPANY.

CAPITAL $900.000.

WESTERN TRANSPORTATION COMPANY.

CAPITAL $900,000.

AND THE NEW YORK CENTRAL R. R. Co.

We would respectfully announce to the Millers, Merchants and Manufacturers of Michigan, that the recent reduction of Canal Tolls on the Erie Canal, will enable us to carry eastward, from Detroit,

FLOUR, WHEAT, CORN, OATS, WOOL, ASHES, HIDES,

And all other products of Michigan, at prices much below those of former years. Our lines are
THE MODEL LINES OF THE COUNTRY.

J. L. HURD & Co.,
[11]1yr Foot of Second-st.

Dr. H. BIGELOW, OCULIST,

(Office, Room No. 9 Sheldon Block, opposite the Peninsular Bank, Jefferson ave., Detroit, Mich.,) respectfully announces to the public generally that he is now engaged in treating the various diseases of the Eye, with much success. Many certificates and recommendations might here be given, but such things are so common at this day, that it is deemed sufficient merely to say to those afflicted, COME AND SEE. H.'s treatment is the same as that practiced by the late Dr. George Bigelow. [13]

HARD TIMES NO MORE." ANY PERSON (Lady or Gentleman,) in the United States, possessing a small capital of from $3 to $7 can enter into an easy and respectable business, by which from $5 to $10 per *day can be realized.* For particulars, address, (with stamp,) W. R. ACTON & CO.,
10-13w 41 North Sixth-st, Philadelphia.

HUNGARIAN GRASS, Millet, Chinese Sugar Cane, Clover, Timothy, Red Top, Blue Grass and Orchard Grass Seeds. Peas, Early and late varieties.—Sweet Corn, Stowell's Evergreen Corn. Garden Beans, bush and pole of many kinds. For sale in quantities to suit by M. T. GARDENER & CO., Seedsmen.
Detroit, February 24, 1859. 9-8w

BURNHAM & Co., Dealers in all kinds of Agricultural Implements, Garden and Field Seeds, Salt, Plaster, Coal, Water and Stone Lime. Storage and Commission. Warehouse near Rail Road depot. Battle Creek Michigan. { G. S. STEELING, { D. B. BURNHAM.

Horse Powers, Threshers and Cleaners!

PITT'S 8 AND 10 HORSE, EMERY'S 1 AND 2 Horse (tread) Powers, Pease's Excelsior Powers, Corn and Cob Mills, Corn Mill and Feed Mills, Flour Mills, Cross-cut and Circular Saw Mills, Leonard Smith's Smut Machines. D. O. & W. S. PENFIELD,
No. 108 Woodward Ave., Detroit.

SEEDS, SEEDS!

FRESH SHAKER SEEDS, of LAST YEARS' growth and warranted. Also, Spring Wheat, Sweet Potatoes of several kinds, King Philip, Flour, Dutton, Eight Rowed and Sweet Corn, Timothy, Clover, Barley, Peas, &c., at PENFIELD'S,
108 Woodward Ave., Detroit.

AYER'S CATHARTIC PILLS,
FOR ALL THE PURPOSES OF A FAMILY PHYSIC,

Are so composed that disease within the range of their action can rarely withstand or evade them. Their penetrating properties search, and cleanse, and invigorate every portion of the human organism, correcting its diseased action, and restoring its healthy vitalities. As a consequence of these properties, the invalid who is bowed down with pain or physical debility is astonished to find his health or energy restored by a remedy at once so simple and inviting.

Not only do they cure the every-day complaints of every body, but also many formidable and dangerous diseases. The agent below named is pleased to furnish gratis my American Almanac, containing certificates of their cures, and directions for their use in the following complaints: *Costiveness, Heartburn, Headache arising from disordered Stomach, Nausea, Indigestion, Pain in and Morbid Inaction of the Bowels, Flatulency, Loss of Appetite, Jaundice,* and other kindred complaints, arising from a low state of the body or obstruction of its functions.

Do not be put off by unprincipled Dealers with some other pill they make more profit on. Ask for AYER'S PILLS, and take nothing else.

AYER'S CHERRY PECTORAL.

FOR THE RAPID CURE OF

COUGHS, COLDS, HOARSENESS, INFUENZA, BRONCHITIS, WHOOPING COUGH, ASTHMA, AND INCIPIENT CONSUMPTION.

So wide is the field of its usefulness and so numerous are the cases of its cures, that almost every section of country abounds in persons publicly known, who have been restored from alarming and even desperate diseases of the lungs by its use. When once tried, its superiority over every other medicine of its kind is too apparent to escape observation, and where its virtues are known, the public no longer hesitate what antidote to employ for the distressing and dangerous affections of the pulmonary organs that are incident to our climate. While many inferior remedies thrust upon the community have failed and been discarded, this has gained friends by every trial, conferred benefits on the afflicted they can never forget, and produced cures too numerous and too remarkable to be forgotten.

Prepared by Dr. J. C. AYER,
PRACTICAL AND ANALYTICAL CHEMIST,
Lowell, Mass.

Sold by J. S. Farrand, Detroit, and by all Druggists every where. [2]4w

FOR SALE
AT THE
AMERICAN SEED STORE
22 Monroe Avenue, Detroit, Mich.

PEABODY'S PROLIFIC CORN!
A NEW VARIETY.

It grows from three to ten ears on a stalk. Six ears planted by John W. Shaw, last year, produced *one hundred* bushels of sound corn. This Corn was originated by a careful scientific cultivator on Long Island. It comes up stout and is more forward than common corn. Plant two kernels in a hill, four feet apart each way.

PRICE—Fifty cents per quart, or Fifteen cents per ear.

HUNGARIAN GRASS SEED!

100 BUSHELS FOR SALE.

This justly celebraetd Grass Seed has been raised for two years in Iowa and Wisconsin, and to some extent in Illinois and Michigan, the past season. All who have raised it, invariably bear testimony to its unprecedented yield. In some cases as high as seven, and rarely under four tons to the acre of a most healthy and nutritious Grass. It yields from 25 to 40 bushels of seed to the acre, which makes good feed for horses and cattle. They not only eat it with great relish, but it keeps them in a more healthy and better condition than any feed yet tried.

PRICE--$3 per bushel.

We subjoin the following

Testimonials:

OTTUMWA, IOWA, Jan. 22, 1858.

To whom it may concern:—This is to certify that crops of Hungarian Grass were entered for premiums at our Agricultural Fair last fall, varyiug from five to over seven tons to the acre of hay, and thirty-seven bushels to the acre of seed, and affidavits were made to the same.—This section of country was visited by severe drouth the fore part of last season, so that the crop of Timothy was scarcely worth harvesting, yet the Hungarian was good, averaging not less than four tons to the acre throughout the country. Its qualities for feeding are spoken of in high terms by all who have used it.

L. D. MORSE,
Secretary of Wapello Co. Agricultural Society.

SALINE, MICH., Jan. 1859.

Mr. J. J. Lyon, Sir:—In reply to your question asking "how I like the Hungarian Grass," I will say that it is the best thing I have ever raised for feeding stock, and I shall not raise any other hay hereafter. It cannot be too highly recommended. Yours,
SAMUEL ROBINSON.

Mr. Irwin Peck, of Ypsilanti, says that "Farmers had better plough up their Timothy meadows and sow the Hungarian Grass, as ten acres of it is worth more for stock purposes than twenty acres of any other hay."—Farmers who have raised it, unite in giving the same testimony relative to its merits, as do Messrs. Robinson and Peck.

This unrivalled Grass has been raised in several counties in the State of Michigan, the past season, by some of the most extensive Farmers in the State, who recommend it as surpassing all other crops for stock purposes. Some have raised as high as four tons of excellent hay and thirty bushels of seed to the acre, although the season was very unfavorable for it. Try it, Farmers, one and all, and you will never regret it. Sow at any time between April 1st, and July, at the rate of one bushel to three acres.

The few farmers named below, are among the many who have raised it, and can testify as to its qualities:

I. & J. Peck, Ypsilanti; S. Howell, Saline; Mathew Howell, Saline; Samuel Robinson, Saline; P. & Zeno, Comstock, Raisin; L Vanakin, Ypsilanti; J. B. Lapham, Manchestor; D. D. Tooker, Napoleon; S. A. Cady Wayne; A. Gulley, Wayne: L. Terrill, Plymouth; A. Cook, Plymouth.

BLOSS & CO.,
No. 22 Monroe Avenue, Detroit.

SHORT HORNS FOR SALE. I hereby offer for sale several head of young full blood Shorthorn stock, bred from my bull LENOX, to which was awarded the first premium of the State Agricultural Society in 1858 For further particulars address, D. M. UHL.
7-2m Ypsilanti.

WHEELER, MELICK & CO.,
PROPRIETORS
NEW YORK STATE AGRICULTURAL WORKS.

[DOUBLE POWER AND THRESHER AND WINNOWER, AT WORK.]

Manufacturers of Endless Chain Railway Horse Powers, and Farmers' and Planters' Machinery for Horse Power use, and owners of the patents on, and principal makers of the following valuable Machines:

WHEELER'S PATENT DOUBLE HORSE POWER,
AND
IMPROVED COMBINED THRESHER AND WINNOWER.

Our first Combined Thresher and Winnower was invented and made in 1851. Continued experiments resulted in 1857, in the present

WHEELER'S IMPROVED PATENT COMBINED THRESHER AND WINNOWER,

The Machine is a model of simplicity and compactness, and is made in the most substantial manner so that its durability and its efficiency and perfection of work. Its capacity, unper ordinary circumstances, has been from 125 to 175 bushels of Wheat, and from 200 to 300 bushels of Oats per day. It works all other kinds of Grain equally well, and also threshes and cleans Rice, and Timothy seed. Price $245.

WHEELER'S PATENT SINGLE HORSE POWER,
AND
OVERSHOT THRESHER WITH VIBRATING SEPARATOR.

This is a One Horse Machine, adapted to the wants of medium and small grain growers. It separates grain and chaff from the straw, and threshes from 75 to 100 bushels of Wheat, or twice as many Oats per day without changing horses—by a change nearly double the quantity may be threshed. Price $128.

WHEELER'S PATENT DOUBLE HORSE POWER,
AND
OVERSHOT THRESHER WITH VIBRATING SEPARATOR.
[SHOWN IN THE CUT.]

This Machine is like the preceding, but larger, and for two horses. It does double the work of the Single Machine, and is adapted to the wants of large and medium grain growers and persons who make a business of threshing. Price $160.

Also, Circular and Cross-Cut Sawing Machines, Clover Hullers, Feed Cutters, Mowers and Reapers, Horse Rakes, and other Farming Machines.

Our Horse Powers are adapted in all respects to driving every kind of Agricultural and other machines that admit of being driven by Horse Power, and our Threshers may be driven by any of the ordinary kinds of Horse Powers in use—either are sold separately.

☞ To persons wishing more information and applying by mail, we will forward a Circular containing such details as purchasers mostly want—and can refer to gentlemen having our Machines in every State and Territory.

Our firm have been engaged in manufacturing this class of Agricultural Machinery twenty-four years, and have had longer, larger and more extended and successful experience than any other house.

All our Machines are warranted to give entire satisfaction, or may be returned at the expiration of a reasonable time for trial.

☞ Orders from any part of the United States and Territories, or Canada, accompanied with satisfactory references, will be filled with promptness and fidelity; and Machines, securely packed, will be forwarded according to instructions, or by cheapest and best routes.

WHEELER, MELICK & CO.,
2-2w **Albany, N. Y.**

THE YOUNG TROTTING STALLION,
KEMBLE JACKSON,

WILL Stand for mares the coming season, at Spring Brook Farm, adjoining the Village of Farmington, Oakland county Mich., commencing April 4th.

Owing to the extreme hard times among farmers—loss of crops the past season, &c., I have concluded to reduce the price of my horses.

KEMBLE LACKSON wil stand at $20 the season.—Money to be paid when mare is first sewed or a good note given for the amount.

Good pasture furnished at fifty cents per week. All accidents and escapes at the owners risk. Season to close on the 30th day of July 1859.

Pedigree of Kemble Jackson.

KEMBLE JACKSON—Mahogany bay, 16 hands high. Star in his forehead; hind feet white half way up to gambrel joints. Foaled June 14, 1854. The property of Isaac Akin, Pauling, Dutchess Co., N. Y. Sire, Kemble Jackson; dam, Lady Moore.

Kemble Jackson was by Andrew Jackson; his dam, Fanny Kemble, sister to Charles Kemble, and sired by Sir Archy: her dam was Maria, sired by Gallatin; Maria's dam was got by Simms' Wildair, she out of a mare got by Morton's Traveler; her dam was an imported mare, name unknown, but thoroughbred.

Andrew Jackson was by Young Bashaw; dam by Why-not, by Imp. Messenger; Young Bashaw was by the Imp. Tripolitan Barb, Grand Bashaw; Young Bashaw's dam was a daughter of Messenger, said to be thoroughbred.

Lady Moore was out of Messenger Maid, by Membrino Paymaster; he by Old Membrino, by Imp. Messenger.
F. E. ELDRED, Detroit.

GEO. F. GREGORY, Agent.

THE YOUNG TROTTING STALLION,
ISLAND JACKSON,

WILL stand for mares the coming Season at Spring Brook Farm, adjoining the Village of Farmington, Oakland county, Commencing April 4th, at the reduced price of $10 the Season.

Season money to be paid when mare is first served or a good note given for the amount.

Good pasture furnished at fifty cents per week, all accidents and escapes at the owners risk. Season to close July 30th, 1859.

Pedigree of Island Jackson.

Is Blood Bay 15½ hands high foaled July 5, 1855. Sire Jackson, by Andrew Jackson; dam, Bellounder. Andrew Jackson was by Young Bashaw; dam, Why-not by Imp. Messenger. Young Bashaw, by the Imp. Tripolitan Barb, Grand Bashaw; dam, Messenger.
F. E. ELDRED, Detroit.

GEO. F. GREGORY, Agent.

THE TROTTING STALLION,
GLEN BLACK HAWK,

WILL Stand for Mares the ensuing Season as follows: At Redford, Hicks' Tavern, Monday's and Tuesdays; at Detroit, Gratiot Road 1½ miles from City Hall, Wednesdays and Thursdays; on Grosse Isle, Bachus' Farm, Fridays and Saturdays.

Season the commence April 4th, and close July 30th.

TERMS:—$10 the season; $15 to Insure.

Season money to be paid when mare is first served or a good note given for the amount.

Pedigree.

Sire, Lone Star, by Old Vermont Black Hawk; dam, Messenger. F. E. ELDRED, Detroit.
L. T. BULLARD, Agent.

GLEN BLACK HAWK
FOR SALE.

GLEN BLACK HAWK, 6 years old, jet black, perfectly kind and gentle in the harness, single or double—took the second premium, $50, at the National Horse Show at Kalamazoo, in October last—is a good traveler, and for style cannot be beat; perfectly sound, and a sure foal getter; will be sold at a bargain. Any one wishing a good stock horse cannot do better than give me a call. Pedigree—Sire Lone Star, dam Messenger. Lone Star was by Vermont or Hill Black Hawk, was a jet black, and sold to a Philadelphia company for $3,000. F. E. ELDRED.
Detroit, January 1859, [15] m23

STOCK FOR SALE.

THE partnership of Bushnell & Hudson is dissolved the stock remaining in the hands of the subscriber, who continues to breed for cash or approved credit at very reduced prices, Durham cattle, (bulls, cows and heifers,) Jacks and Jennetts, South Down sheep, and Chester White pigs. SETH A. BUSHNELL.
Hartford, Trumbull Co., O., Dec. 1st, 1858. [8]tf

MILLETT SEED WANTED. 100 bushels wanted to purchase at the American Seedstore by J. BLOSS & CO.,
13-2w No. 22 Monroe Avenue, Detroit.

THE TROTTING STALLION
HAMBLETONIAN,
Will stand for mares the ensuing Season commencing April 4th, as follows:

At JOHN CLARK'S, Milford, Monday and Tuesdays;
At JOHN HATHAN'S, New Hudson, Wednesdays;
At SAM'L. LATHROP'S, Northville, Thursdays;
At JAMES ROOTS, Plymouth, Fridays and Saturdays
Leaving each place at 5 o'clock P. M.

From the general complaint of poor crops last year I have concluded to reduce the price of my horse for this Season.

Terms--$10 the Season; $15 to Insure.

Season money to be paid when the Mare is first served, or a good note given for the amount. Persons, parting with mares before foaling time will be held responsible for the season money. All mares not regularly returned will be holden by the season. Pasture furnished at fifty cents per week. All accidents and escapes at the owner's risk. Season to close on the first of August, 1859. Grain will be received for insurance money, delivered at my farm on or before the first day of February 1860, at Detroit prices.

HAMBLETONIAN was awarded the First Premium at the Oakland County Fair, October, 1857.

At the State Fair in Detroit last fall his colts took more premiums than any other Stallion in the State.

Pedigree of Hambletonian.

HAMBLETONIAN was sired by Geo. Barney's horse Henry, of Whitehall, Washington county, New York—he by Imported Signal, out of a Messenger mare. Hambletonian's dam by Mambrino, grandam Bishop's Hambletonian who was sired by Imported Messenger. Hambletonian is 15¼ hand shigh, weighs 1150 pounds; possessing fine action, with great powers of endurance; untrained, but shows good evidence of speed. Hambletonian is a beautiful bloodbay, black mane, tail and limbs, without a white hair upon him, and for style can not be excelled by any horse in the State.
F. E. ELDRED, Detroit.

HIRAM E. CADY, Agent.

A BERKSHIRE BOAR FOR SALE. The undersigned offers for sale a pure bred Berkshire boar, at a resonable rate. His dam was bred by L. G. Morris, of Mount Fordham, N. Y., and his sire by Col. John Prince of Sandwich, C. W. Apply to
F. E. ELDRED, Detroit.
March 10, 1859. 11-4w

FURNITURE WAREHOUSE,
ON JEFFERSON AVENUE,
BELOW MICHIGAN EXCHANGE, DETROIT.

The subscribers keep constantly on hand a large stock of **ELEGANT FURNITURE,**

Both Modern and Antique Styles; in Rosewood, Mahogany and Domesic Wood.

Those wishing rich and fashionable furniture, will always find a great variety to select from—equal in every respect to anything in the Eastern market. Being in constant receipt of Pattern Pieces from the FASHIONABLE MAKERS IN NEW YORK, they are enabled to guarantee the most **Perfect Satisfaction** to their customers.

They also keep constantly on hand a large and complete assortment of Plain Furniture of Mahogany, Cherry and Walnut. In short, every article in the line of Household Furniture will be found in their Stock, including Chairs of every style and price, from four shillings to sixty dollars each. The subscribers now have on hand, and make to order, best

HAIR MATTRESSES.

Their customers can rely upon getting a genuine article CORN-HUSK MATTRESSES & STRAW PALLIASES constantly on hand. For the trade we keep constantly a large stock of Mahogany and Rosewood Veneer.
STEVENS & ZUG.

100,000 *WILSON'S*
ALBANY STRAWBERRY
FOR SALE.

THIS VARIETY yields with the Subscriber from twenty-five to forty bushels more fruit per acre than either the Early Scarlet or Crimson Cone and the fruit sells for $1 more per bushel. Price $2 per 100; $7,50 per 500: $10 per 1,000.

Also 20,000 imported strong 1 year old pear stocks.

Address J. SLOAN, E. Corning, Jr.'s, Nursery, Albany N. Y. 11-4w

DRAIN TILE!

WE KEEP CONSTANTLY ON HAND THE different kinds of Drain Tile, at PENFIELD'S, 108 Wood[illegible] Avenue.